A Clinical Lecture

ON

TWO CASES IN WHICH A DOUBLED SECOND SOUND WAS AUDIBLE ONLY NEAR THE APEX OF THE HEART.

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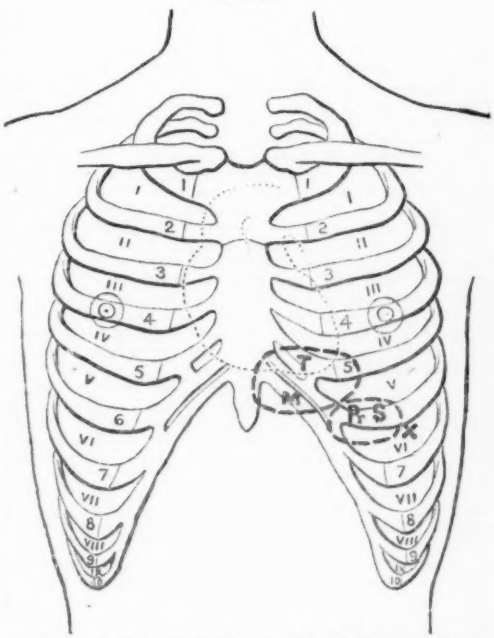
GENTLEMEN,—The title of this lecture may cause you to think that I have chosen a subject which is not in the highest degree of practical utility; but I have selected the two cases which are to serve as the groundwork of my observations to-day: first, because they cannot fail, apart from all abstruse questions and undetermined problems, to inculcate some useful lessons; next, because they can tell us much in corroboration of extant teaching; and lastly, because they illustrate some doctrines lately discussed which are not accepted by a majority of observers. We are not the judges of the ultimate practical significance of observed phenomena; let us read the lines which these patients unconsciously write for us carefully and faithfully, and then let us invoke with due judgment the scientific uses of the imagination. I shall give you an outline of the cases with a running commentary.

CASE 1.—A woman aged twenty-one years was admitted on Sept. 6th, 1894, for acute rheumatism. In regard to her family history, her father, aged fifty-three years, is healthy; her mother, aged fifty-two years, is healthy; and her five brothers are healthy. She has three sisters; one, aged thirty-two years, suffers from heart trouble, and one, aged twenty-seven years, died from heart disease and dropsy. Note the evidence of hereditary tendency. One sister died from "heart disease and dropsy" at the age of twenty-seven years; another sister aged thirty-two years is now suffering from some disease of the heart. Considering that these are young persons, the period of advent of diseases of degeneration not having arrived, there is the highest probability that the heart diseases were and are of a rheumatic kind. The patient takes little alcoholic stimulants. She has had three attacks of rheumatic fever besides the present one, the first attack occurring when five years old, the second when twelve years old, and the third when nineteen years old. The rheumatic proclivity, therefore, is undoubted. Her present illness began about a fortnight before admission, when she had an attack of shivering followed by flushings of heat and by nausea. Pains began in the knees, spreading all over her body, accompanied by headache. After her admission into the hospital, when in bed, she was quiet and comfortable; she slept well, though the left knee was hot and painful, and there was some effusion into the joint. There was no sour smell to be detected. Her tongue was coated, the appetite bad, and the bowels costive; her pulse was soft and compressible. The heart's apex seemed to be in the fifth interspace in the nipple line. The cardiac dulness did not notably deviate from the normal. On auscultation a soft systolic bruit was heard at the apex and was conducted towards the nipple; there was a slight bruit, systolic in time, to be heard at the left of the sternum in the second interspace. The second (pulmonic) sound was only slightly accentuated. Let us pause for a few moments to consider the significance of these signs. In view of the repeated attacks of rheumatism it is in the highest degree probable that there should have been endocarditis; this would most probably affect the mitral valve, and the systolic murmur at the apex showed that some incompetency had been produced. Inasmuch, however, as there were no signs of dilatation of the heart, and as the second pulmonic sound was not markedly loud, the lesion was not considerable. If there had been much regurgitation the backflow would have caused a greater pressure in the pulmonary artery and the second sound caused by the sudden tension of the semilunar valves of the pulmonary artery would have been louder. The physical signs in regard to the lungs showed no notable morbid condition. The nervous system was only slightly affected. The patient was intelligent; the speech clear. Except headache and slight vertigo occasionally there was nothing that she complained of, but there was pain on movement of most of the larger joints. Menstruation had been irregular and rather painful. The temperature varied between 103° and 104° F. The urine had a specific gravity of 1015, was acid, of amber colour, and contained no albumen and no sugar. On Sept. 10th great pain about the cardiac region was complained of, and this was increased by deep inspiration. The hands and arms were painful. On Sept. 21st the patient complained of pains all over her body, accompanied by a sore throat. She vomited a good deal of dark greenish fluid. The temperature, which had been between 97° and 100° for a week, rose for the last two days to between 100° and 102°. The bruit at the apex was still systolic in time, but seemed much longer and harsher. On Oct. 1st the second pulmonary sound was noted to be louder, and there was a presystolic murmur as well as systolic, but no visible pulsation. On Oct. 8th a double second sound was heard at the apex, but not at the base; the presystolic murmur was not so well marked. This double sound had the characters presently to be described; the position and area of audibility are noted on the chart (Fig. 1). On Oct. 15th the second sound at the

FIG. 1.



Positions of the auscultatory signs. Pr S, area of presystolic murmur. The dotted oval above this indicates the area of audibility of the doubled sound in diastole. At M the repeated element had the sound of murmur; at T the sound of tension.

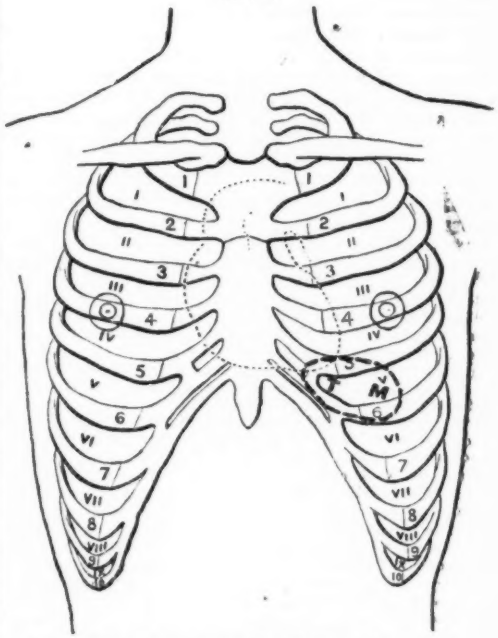
base was well marked, but not loud. Over the pulmonary valves the second sound was heard less acutely than over the aortic area and it was loudest at the ensiform cartilage. On nearing the apex a systolic, blowing murmur was heard and there was a dull sound after the second sound in diastole. The heart sounds were not heard at the back. On Oct. 22nd the double sound in diastole was heard internal to the apex following a blowing, systolic murmur. The patient was discharged on Oct. 29th; there were then no cardiac discomforts or arthritic symptoms.

Let us now consider the progress of the case, which was placed under our usual treatment by salicylate of sodium. The temperature, of remittent type, went down in a very satisfactory way for seven days, and on the eighth was slightly below the normal, that being on Sept. 13th. During this period, however, though the joint symptoms receded, there

was much pain in the heart region increased by deep inspiration. Then, after some slight subfebrile manifestations, the temperature began to rise again, so that on the evening of the 21st it was 102·5°, and this in spite of treatment by the salicylates. The signs in regard to the heart altered; the systolic bruit at the apex at first became more prolonged and harsher, the second sound over the pulmonic valves louder, and on Oct. 1st a presystolic murmur was heard. This soon became less audible, but another phenomenon took its place. Three sounds at, or slightly internal to, the apex were heard. (1) A blowing systolic murmur; (2) the second sound having the characters previously noted; and (3) a dull sound, as of tension, in diastole. This is the phenomenon which has been described as reduplication of the second sound, and occurs in more than half the cases—probably nearly all—of mitral stenosis at some period of their history. Let us endeavour to trace the evolution of the endocardial lesion in this case in the light of the physical signs observed. As I have said, there was probably in this patient before the acute illness began some old rheumatic changes about the mitral orifice which had brought about a slight incompetence of the valve. With this attack there was a new outburst of rheumatic endocarditis, and the first indication of this was the increased prolongation and roughness of the systolic murmur at the apex. Then we became aware of a presystolic murmur, probably because a ring of vegetations obstructed the current of blood from auricle to ventricle. For some reason, however, this presystolic murmur disappeared; it might be that the surface over which the blood had to pass became less rough. But we had at one spot near the apex a triple sound just like that known as a reduplicated second sound, and at another spot still nearer to the apex (yet both within an area which you could cover with a half-crown piece) a triple sound, divisible thus: (1) the systolic murmur, (2) the second sound, and (3) a short murmur in the early portion of diastole. Now if in your observation of a case of rheumatic fever—during or long after the febrile period—you find such a triple sound at or near the apex, you may be almost sure that your patient will ultimately manifest signs of obstructive disease at the mitral orifice—mitral stenosis. Dr. Cheadle, in his Harveian lectures on the Rheumatic State in Childhood, has confirmed my views as to the significance of this sign, and so have other observers. Dr. Cheadle has limited the significance of the phenomenon as prophetic of mitral stenosis to the cases in which it is audible only at or near the apex—that is to say, in the mitral area. A long series of observations has taught me that, whilst in the early periods of the cardiac disease the triple sound is heard only at the apex, as years go on it becomes more marked at the base of the heart and less at the apex, the presystolic murmur occupying the area of the formerly heard triple sound, the latter becoming more and more pronounced at the base. In the case we have just observed the obstruction at the mitral orifice was evidently brought about by an acute attack of rheumatic endocarditis. Granulations formed about the ring to which the mitral flaps are attached. Probably the borders of the valve near the auriculo-ventricular orifice have become thickened and fused together, and ultimately the mitral curtains will be converted into a membranous funnel. In a large number of cases of mitral stenosis an acute rheumatic origin is not to be traced. The affection arises very gradually without rheumatic symptoms, though a great majority of the subjects thereof show hereditary predisposition to rheumatism. In a minority of cases I think it most probable that the affection arises without any intervention of rheumatism, the form of endocarditis being quite distinct from the rheumatic. On this point we shall obtain some evidence in our consideration of the next case.

CASE 2.—A man aged forty-two years was admitted on Oct. 11th, 1894, for nephritis. His father lived to the age of seventy-five years, and suffered from gout; his mother died at seventy-seven years of age, the cause of death not being known. One brother and three sisters are alive and healthy. There were eight other children, but the patient thinks they all died in childhood. He has lived for many years in London, though born in Devonshire. He says he drinks about one pint of ale a day. There is no history of rheumatism nor of syphilis. He seemed quite well in July, when he had an attack of inflammation of the kidneys, for which he was treated as an in-patient at this hospital and after fourteen days was discharged. He was slightly anæmic and had considerable œdema of the lower extremities; he lay quietly and comfortably in bed, and suffered no pain except occasional headache. The tongue was dry and slightly coated; the bowels regular. There were some dyspeptic symptoms—viz., distension and pain after food. The liver and spleen seemed normal. The apex of the heart was in the fifth interspace; the cardiac dulness was not more than normal, perhaps less. On auscultation a systolic murmur was heard at the apex. Examination of the respiratory system showed no abnormal signs, except a few rhonchi over both lungs. The patient occasionally suffered from incontinence of urine. Examination of the eyes showed high myopia (about −18) a large amount of choroidal atrophy with a little pigmentation. The specific gravity of the urine was 1016, about one-eighth albumen, and no sugar. On Oct. 18th the albumen had increased to one-half. There was no murmur at the apex, but a double second sound was heard—i.e., after the normal second sound and a considerable pause a dull shock-sound was heard in about mid-diastole. This doubling of the second sound was confined to the neighbourhood of the apex. The area of audibility and the characters of the sounds are indicated on the chart (Fig. 2). The radial artery was cylindrical, its coats

FIG. 2.



Dotted outline shows the area of audibility of the doubled sound in diastole. T, sound of tension; M, of murmur.

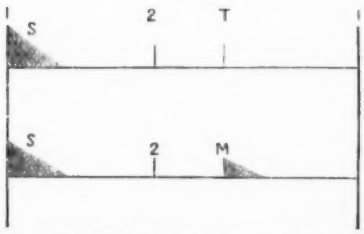
moderately thickened; the pulse was slow, 52, tension rather above normal but quite regular. On Oct. 25th the aortic and pulmonic second sounds were well marked, but not loud. The pulmonic was not quite so loud as the aortic. The double sound was still heard in the interspace below the nipple, but not so well-marked. The doubling was rendered more decided by the patient sitting up and extending his arms above his head. On Oct. 27th the patient felt quite strong; his appetite had much improved. The pulse was 54. There was still one-third of albumen in the urine. On Nov. 8th the patient felt much better. The pulse was 60. A double second sound was still heard at the apex, inaudible except within the area marked upon the chart.

You will notice how closely the auscultatory phenomena in this case resemble those in the former with the exception that there never had been as yet a presystolic murmur. The murmur was in mid diastole. This patient had manifested no trace of rheumatism; there was no tendency to rheumatism in members of his family. The phenomena seem to be in sequence to renal disease. Will this patient also manifest the condition of mitral stenosis? Very probably, for we have evidence that gout and renal disease are associated in a

very marked degree with mitral stenosis in persons of later adult life. It seems probable that the obstruction at the mitral orifice may be due to fibroid and degenerative changes involving the curtains of the valve, the chordæ tendineæ, and the muscular columns without the occurrence of an initial endocarditis. Let us now consider more minutely the phenomena we have observed and endeavour to obtain an explanation of them. First, as to the *mode of observation*. In the process of auscultation in the usual way you become aware as you get nearer to the apex that three sounds are audible. I placed my stethoscope at a point internal to that of the apex beat, and I asked my clinical clerk how many sounds he heard. His answer was "Three." Now, you know well that in the majority of cases, whether in health or in disease, you hear two sounds, the dull and more prolonged first sound followed by the shorter, sharper, or less dull second sound. In some cases you hear only one sound and that the first; the second sound is inaudible at the apex. In the cases under observation we marked with a dermatographic pencil the area over which we heard the three sounds, or the triple sound if you like so to term it. Having done that we listened again over the area in order to distinguish the characters of the sounds. We found no difficulty in determining which was the first sound—i.e., that which was coincident with the apex beat. We then observed that over a spot near the apex the second element of the doubled sound which followed this had the character of a brief roughness or blow, whilst a little nearer to the sternum it was a sudden but dull sound giving the idea of tension. We marked these positions on the chest wall: M for murmur, T for tension. Then we passed over the marked areas a pencil dipped in oil, outlining also the positions of the adjoining intercostal spaces and the ensiform cartilage. Over the surface we pressed a sheet of copying paper and obtained a print of the relative positions of the signs we had observed. I gave these outlines to Mr. Daniellson, who has reduced them to a convenient size and cut the woodblocks, Figs. 1 and 2, which indicate as exactly as can be the areas of audibility of the sounds. I must ask you to note that at some periods the murmur sound was inaudible, the tension sound being evident after its first appearance for all the periods during which the patients were in the hospital. We have had evidence, however, that the doubled sound may in some cases altogether disappear for a time. Now I must ask you to pass from the consideration of these two cases to that of a large number of others of mitral stenosis which I have observed, and let me tell you what I deem to be the changes in the auscultatory phenomena as the months and years go on. The isolated murmur sound disappears and a typical presystolic murmur takes its place; the repeated sound of tension becomes more pronounced and its area of audibility changes; it mounts to the fourth, third, and second left intercostal spaces, and in some cases we hear it on the right of the sternum as well as at the left. It becomes a sharper, louder sound, closely resembling an accentuated second sound. It vividly recalls the postman's knock. In one case I have heard this in a most marked manner at the back just internal to the angle of the left scapula. Still later the doubled sound wholly disappears, and when a case of mitral stenosis nearly approaches heart failure the presystolic murmur itself may no longer be heard. To return to our method of recording the signs observed we will attempt to indicate the positions these occupy in the cardiac cycle. We draw a straight horizontal line, which is supposed to represent the duration of one cardiac revolution. We intersect it by a vertical line, which indicates the commencement of ventricular systole, and divide it into two unequal portions by another short vertical line, which designates the commencement of ventricular diastole. Say, for argument, that the pulse is 60 and that the period of systole occupies four-tenths of the whole length, and that of diastole (the long pause) six-tenths. The distance between the first and second vertical lines, indicating the commencement of ventricular systole and of ventricular diastole respectively, will comprise four time divisions, and that between the second vertical line and the commencement of the succeeding systole—i.e., the long pause—six divisions. Of course the indications are approximative only, but they are convenient aids to precision. In our first case we listen at the base of the heart, and fix in our minds the time position of the second sound, and then on nearing the apex we find that the next tension sound takes place very quickly after it; the doubled sound is heard in the early part of diastole. In the second case there is a considerably longer interval between these sounds. In fact, the doubled sound of tension seems to be nearly in the middle of diastole, and the sound of murmur heard a little nearer the apex appears in a similar position (Fig. 3).

We will now consider the question of the cause of the double sound of tension that we hear in cases of mitral stenosis. There are two theories as to its mode of production. According to the first theory, which has been generally accepted, there is a real doubling of the second sound of the heart—the valves of the aorta and of the pulmonary artery do not close as in normal conditions, giving rise to one sound, but those of the one vessel close before those of the other, the interval of time being sufficient for the ear to appreciate two sounds. So the second sound of the heart is said to be reduplicated. According to the other theory the doubling of the second sound is not real but simulated. The second sound is heard in the normal way, but it is followed by another shock-sound (or sound of tension), which is produced not at the valves of the great arteries but in the left ventricle.

FIG. 3.



Showing the estimated positions of the sounds in the second case. S, systolic murmur; 2, second sound; T, interpolated sound of tension; M, interpolated sound of murmur.

It is this last view of the mechanism of the phenomenon which to me seems correct. Before proceeding further let us ask ourselves what is the cause of the normal second sound of the heart. The answer usually given to this question is this: the semilunar valves of the aorta and pulmonary artery respectively, after the forcible injection of blood into the aorta by the ventricular systole, come together suddenly, and the sound is produced by their concussion. Look at the delicate membrane of these valves. Is it probable, do you think, that the edges of these structures should strike together with sufficient force to produce the snap of the second sound more than 90,000 times a day through the years of a long life without injury from the mere violence done to them? Now the most careful and most recent investigations show that in the systole of the ventricles there is not an abrupt and sudden injection of blood into the great vessels (the aorta and pulmonary artery), but, though all occurs in a brief period of time, a graduated series of successive movements and coördinated actions. First, the muscles of the ventricular wall commence their contraction; shortly afterwards, but yet appreciably later, the musculi papillares begin and continue to tug down the curtains of the valves by their tendinous cords; then these relax while yet the muscles of the wall are contracted; lastly, the ventricular muscle relaxes also and then active dilatation (suction) in diastole begins. It is a natural consequence that the impulsion of the blood into the great vessels is not abrupt, but gradual, and the closure of the semilunar valves must be not abrupt, but gradual. At first the force must be insufficient to overcome the inertia of the blood in the vessels weighing down the cusps; then by the combined forces of the contractions of the ventricles and the papillary muscles these semilunes are gradually opened out; but towards the end of systole the force of impulsion is diminished—there is more pressure above the valves on account of the increased volume and distension there, but decreased pressure below as the ventricle becomes emptied and the papillary muscles no longer reinforce the muscular walls of the ventricle. This reasoning shows us (as Mr. Mayo Collier pointed out in his Lectures on the Physiology of the Vascular System at the Royal College of Surgeons of England in 1889) that the semilunar valves do not come together suddenly and abruptly, but gradually. The volume and tension of the blood above them tend more and more to weigh them down, while less and

less blood passes through them from the ventricle. What, then, is the cause of the second sound? The answer is: the sudden tension of the membranes of the already closed valves caused by the relaxation of the ventricles, whereby they are no longer supported on their under surface, and the active suction action of the ventricles in the earliest part of the diastolic period. You can imitate this sound of tension by abruptly stretching an inch of your pocket-handkerchief between your fingers. Now supposing this explanation of the phenomena to be correct, as I believe it is, if we accepted the view that the reduplicated second sound is due to non-synchronous tension of the two sets of valves we should have to concede that the two ventricles expanded in diastole at different times—that there was a sort of see-saw action between them—of which we have no evidence, but much to the contrary.

But let us turn to a practical question. How shall we investigate the second sound of the heart? Place the end of your stethoscope over the second right intercostal space close to the sternum and listen attentively to catch the character and pronunciation of the second sound. Then carry your stethoscope up nearer to the right clavicle, to the episternal notch and over each carotid. Note the degree of audibility and the character of the sound in all these situations. You can have no doubt that the sound you hear in these areas is that produced by the tension of the aortic semilunar valves. Now carry your stethoscope to the left of the sternum; listen to the sound over the second and third left intercostal spaces, comparing it with that you have already heard. If you find the second sound to be louder in these situations than in the former you may conclude that it is the tension of the semilunar valves of the pulmonary artery which is the chief cause. The pulmonic second sound is accentuated. Recent observations have tended to show that the sound of tension of the pulmonary semilunar valves is heard over a very limited area. Dr. Sydney Ringer and Dr. Phear, in an interesting and valuable communication,[1] conclude that the pulmonary element usually forms no part of the second sound as heard to the right of the sternum. "The second sound heard to the right of the sternum is produced, as a rule, exclusively by vibrations generated at the aortic orifice." Dr. William Ewart[2] has further insisted that the pulmonary second sound has a singularly limited area of loudness. He gives elaborate anatomical and other reasons for concluding that the audible vibrations in the case of this sound are conducted only to the anterior chest wall immediately covering the valve as well as to a limited adjacent district. When you place your stethoscope to the left of the sternum below the level of the third interspace you get out of the range of the pulmonic second sound. You should observe the characters of the sound, however, as far as the heart's apex and note where it becomes inaudible. Sir William Broadbent[3] stated that the second sound as heard at the apex is that due to the aortic valve alone. The aortic second sound is conducted by the wall of the left ventricle and is often heard as distinctly at the apex as in the aortic area itself. Dr. Ewart has enforced this teaching; he concludes that the right side of the heart does not conduct the pulmonic second sound. "The aortic second sound commands these cavities (the pulmonary artery through its right branch influencing only the left auricle) in addition to holding the high road for vibrations along the septum, and so practically excluding the pulmonary sound from propagation into the right ventricle." You will, therefore, form your conclusion as to the characters of the aortic second sound from auscultating not only over the second right interspace, the episternal notch, and the carotids, but also over the interspaces below the third interspace on the left side and as far as (and even beyond) the apex of the heart, whilst the characters of the pulmonic second sound will only be found when you listen over the second and third left intercostal spaces near the sternum.

Now as to the relative pronunciations and characters of these two components of the heart's second sound respectively. With regard to the aortic second sound there are two conditions in which we find it especially loud. It may have a sudden, sharp character, or be almost metallic, or like a tap upon a small drum. The two conditions to be especially mentioned are: (*a*) saccular aneurysm of the thoracic aorta arising well above the valves, and (*b*) hypertrophy of the left ventricle, especially with arteriosclerosis (as in chronic renal disease). In the first of these conditions the loud sound is readily explained by the exaggerated strain upon the valves directly on ventricular relaxation (diastole) caused by the abnormal mass of blood pressing downwards from the aorta and its saccular dilatation. In the second, after the forcible injection there is a forcible recoil, the firm-walled contracted arteries increasing the back pressure. Dr. Ringer and Dr. Phear have given experimental evidence emphasising the conclusion that high arterial tension is a cause of a loud aortic second sound. I agree, however, with Dr. Ringer and Dr. Phear, and with Dr. Harry Campbell,[4] when they say that the aortic second sound may be accentuated when the radial (arterial) tension is low. I think with Dr. Campbell that this accentuation is due to an abnormally sudden and rapid diastole of the left ventricle. With regard to abnormal loudness of the pulmonic second sound the cause is over-tension of the blood in the pulmonary artery and its branches. This occurs in its most pronounced degree in mitral regurgitation—and is then, if the ventricular forces are adequate, proportionate to the amount of blood thrown back by the left ventricle into the left auricle and pulmonary veins—and in mitral stenosis when a direct impediment occurs to the work of the right ventricle because the left auricle cannot, as under normal conditions, sufficiently transmit its contents through the obstructed orifice into the left ventricle. There are, however, many other causes for undue loudness—in its limited area—of the pulmonic second sound. We find a loud second sound over the pulmonary artery in chlorosis and anæmia, in states of general feebleness especially after acute and debilitating illnesses, in many diseases of the lungs, and in cases of retraction of the lung and uncovering of the heart, so that the pulmonary artery comes closely in apposition to the wall of the chest. Any cause which weakens the left ventricle and so diminishes the amount of blood which it should transmit to the aorta tends to accumulation of blood in the pulmonary artery and its branches and to an abnormal tension within the vessel evidenced by an exaggerated second sound heard just over its valves. In many of the conditions we have just discussed there must be very disproportionate pressures in the two great vessels, the aorta and the pulmonary artery. We get accentuation of the second sound in one or other area, or in both areas; but very rarely we observe doubling—so-called reduplication. In very free mitral regurgitation the disproportion must be extreme. We observe constantly, unless the right ventricle is too weak, the loud pulmonic second sound, but a doubled second sound, I think I may say, never. In mitral stenosis, on the other hand, when the disproportion of pressure is probably less marked, the so-called reduplicated second sound is very common indeed. Now, if the phenomenon of the repeated sounds were really due to the sound of tension of the semilunar valves of the one vessel being followed at an interval by the sound of tension of those of the other, you ought to be able to hear the double sound best to the aortic side of the second left interspace or, at any rate, at a point not lower than the third interspace, where the pulmonary second sound becomes inaudible; but in our cases, and in many others, the double sound is not heard except in an area in which most of us agree that the pulmonic second sound is inaudible. You will notice that in our two cases the doubled sound is heard only in the neighbourhood of the apex. Do not misunderstand the point for which we are contending. Observers are, I think, for the most part agreed that what they call "reduplication of the second sound" is very common in mitral stenosis. I have shown that in the early stages of the development of mitral stenosis this so-called reduplication of the second sound is audible, not at the base, but near the apex of the heart. This has been confirmed by many observers. Dr. Ringer and Dr. Phear, in their criticism of my opinion,[5] object that such reduplication at the apex is very uncommon. We have had, however, many opportunities lately, and at previous periods, of observing the phenomenon, and, as I have said, many clinical observers have noted it also. If the instances were still more rare, from the admitted data as to the range of audibility of the two components of the second sound, it must be agreed that non-synchronous tension of the valves of the pulmonary artery and the aortic respectively could not explain them. The second element of the sound is in the

[1] THE LANCET, Sept. 29th, 1894.
[2] THE LANCET, Oct. 6th, 1894.
[3] The Pulse, p. 55. Cassell and Co., Limited. 1890.
[4] THE LANCET, Oct. 13th, 1894.
[5] Loc. cit., p. 730.

mitral area, and I have given many reasons for the conclusion that it is produced within the left ventricle.[6] No doubt the so-called reduplication is more frequently observed near the base of the heart than at the apex in cases of mitral stenosis because these are less frequently met with at the earlier periods of their history. It would be strange, however, if we should have to invoke a totally different cause for the production of the phenomenon in the same case at different periods. When in a case of mitral stenosis the doubled sound is heard at the base of the heart its maximum is, as Sir William Broadbent pointed out, over the third left intercostal space close to the sternum. It may be heard, however, over a very wide area to the right and down the sternum far beyond the area given as the limitation of audibility of the pulmonic second sound. I have heard the double sound loudly, having its typical characters, in the left axilla and at the angle of the left scapula.[7] The pulmonic second sound could take no part in this. The explanation that I have given of the so-called reduplication of the second sound in cases of mitral stenosis is this: the first element is the normal second sound, probably accentuated as to its pulmonary component; the second element is a sound of shock or tension within the left ventricle produced by a sudden entry of blood into the ventricle in early diastole, such shock being communicated to the walls of the ventricle or to the anterior curtain of the diseased mitral valve, and so communicated through the septum to the left border of the sternum. Dr. Ringer and Dr. Phear say that they "are unable to understand how, even after the relaxation of the ventricle, the blood can enter through the contracted mitral orifice with any degree of force, or how the diseased and thickened valves can be thrown into such a condition of tension as to produce a valvular sound simulating the second sound." The answer to this is that the constriction at the mitral aperture is a matter of degree; the funnel orifice in many cases could surely permit in diastole a sudden entry of blood into the ventricle with considerable force. On this point the evidence of the cardiograph comes to enlighten us. In some cases of undoubted mitral stenosis there are signs which I think all would agree to be explicable by no other hypothesis than that the entry of blood into the ventricle is more forcible and sudden than under conditions of health. Remember that the pen of the cardiograph is guided by the left ventricle. The record of the diastolic period is written by the apex of the ventricle because of impulses or movements which it receives from the auricle. The consensus of many observations shows that in mitral stenosis (evidenced by a rolling or bubbling presystolic murmur) the apex of the ventricle writes a series of up-and-down lines and curves which can only be due to the impulses of the interrupted, gurgling flow from the auricle. In a case of typical doubling (as it were of the second sound) I have seen the eminence due to the contraction of the auricle more broad and pronounced than I have observed it under any other circumstances whatever. It must be that the mitral orifice, though narrower than the normal, allows the forcible contraction of a hypertrophied and dilated auricle to communicate a strong upheaval to the apex of the left ventricle. I cannot doubt that under the circumstances of over-tension in systole in the left auricle, as in mitral stenosis, there can be sudden and forcible entry of blood into the ventricle in the early part of diastole sufficient to communicate a shock to the structures within the cavity and (from the considerations I have already placed before you) to give rise to an audible sound of tension. I quite concede that there are other cases of extreme stenosis (button-hole mitral, for example, with greatly thickened borders) where it would be illogical to conclude that the passage of blood from auricle to ventricle could be sudden and forcible; but these are, so far as I have observed, precisely the cases in which the so-called reduplication of the second sound is not heard.

I have, I think, given sufficient reasons for the conclusion that the double sound simulating a repetition of the second sound in mitral stenosis is not due to non-synchronous closure of the valves of the pulmonary artery and the aorta respectively. I believe that the second element of the double sound has its origin in the left ventricle, but I do not pretend that the precise explanation of the phenomenon is placed beyond all doubt. Be it remembered that I have contended all along for an explanation of the phenomenon as observed in cases of mitral stenosis. In these I have said that the doubling of the second sound is simulated, not real. I will not go so far as to deny the possibility that under conditions other than those of mitral stenosis the second sound of the heart at the base may be heard as a double sound.

[6] Proceedings of the Medical Society of London, vol. v., p. 191; Diagnosis of Diseases of the Heart and Thoracic Aorta, pp. 213-219, 362-366, and 504-506.

[7] Diagnosis of Diseases of the Heart and Thoracic Aorta, loc. cit., p. 351.

TWO CASES OF ULCER OF THE DUODENUM IN WHICH LAPAROTOMY WAS PERFORMED, WITH REMARKS ON ULCERS OF THE DUODENUM.[1]

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WRITERS on general medicine who refer to ulcer of the duodenum treat of the subject in general terms. The affection is classed with gastric ulcer, which in all respects it closely simulates, and little or no attempt is made to distinguish between the pathology or symptoms of these two kinds of cases. There is a general opinion that gastric ulcer is rare in men, and, therefore, when duodenal perforation occurs in the male sex the symptoms are peculiarly liable to be overlooked or entirely misunderstood, since they are identical with those of perforation of the stomach, which is so exceptional in the male sex. What is held by physicians of the present day regarding duodenal ulcer may be well summed up by quoting from the article on it in the "American Text-book of Medicine," edited by Pepper:[2] "Duodenal ulcer is usually single, but is occasionally multiple. In some cases it occupies partly the duodenum and partly the pylorus. In other instances distinct ulcers may be found in the stomach and duodenum. The disease may attend septicæmia, probably as the result of embolism. Severe burns are also at times productive of it, and freezing is said to act in the same way; while erysipelas, pemphigus, and amyloid degeneration of the bloodvessels of the intestines have also been claimed to be associated with it. The symptoms are in a great majority of cases identical with those of gastric ulcer, and it is then impossible to distinguish between the two lesions. An ulcer of the duodenum is probably present if the pain does not develop until some hours after eating food; if the position of this pain, together with tenderness on pressure, is situated decidedly to the right of the middle line; and if there are profuse bloody stools without vomiting or hæmatemesis. In other cases blood may be vomited and passed by stool. In still others the course of the disease may be entirely latent." It will serve to make more clear the class of cases I especially wish to illustrate if I quote a typical instance, selected from several which are scattered about in medical literature. The case I will first draw attention to is related by the late Surgeon-Major Robinson of the Scots Guards.[3] A healthy and muscular guardsman aged thirty-eight years, who was a "bandsman" and well able to perform his duties, played a game of racquets one afternoon and afterwards proceeded to a music-hall where he ordinarily performed. He was suddenly seized with violent abdominal pain. The abdomen became tympanitic, but there was no urgent vomiting. He was conveyed back to bed, collapse supervened, and he died in about eighteen hours. At the necropsy the whole of the intestines were matted together and there was some greenish fluid in the abdomen. The bubbling of gas drew the attention of the pathologist to the duodenum, and an ulcer large enough to admit a crowquill was found about the centre of that viscus on its anterior aspect. This was not in the least suspected during life, but it is stated that the man had been known to complain of epigastric pain and to press his hand there after laughing loudly. The above abstract well exemplifies what usually happens in these most distressing and mysterious maladies, and the theory of death by poison may readily be started when the surroundings and concomitant circumstances are of a suspicious nature. Murchison relates

[1] A paper read before the Medical Society of London.

[2] Text-book of Medicine, by American Teachers, edited by Dr. Pepper, vol. ii.

[3] Transactions of the Pathological Society of London, vol. ix., p. 220.

such a case where a man died almost instantly from collapse; and a similar case is referred to by Perry and Shaw in their excellent article on Ulcers of the Duodenum in Guy's Hospital Reports for 1894.

I was induced to bring the following two cases, which occurred in my own practice, before the Medical Society of London because they so well illustrate the extreme difficulty that is met with in the diagnosis of duodenal ulcer, and because it is only by a relation of cases, and a collection and consideration of the experiences afforded by them, that we can hope to arrive at anything like proficiency in the management of a class of maladies so protean in their clinical manifestations and so generally unsatisfactory in their treatment. Moreover, the subject has been already dealt with, and it is hoped that this communication may extend and amplify information already acquired. The first case which forcibly drew my attention to the surgical difficulties and uncertainties which surround the subject of duodenal ulcer was as follows. (I am indebted to Mr. Harold, the medical registrar of Charing-cross Hospital, for the abstract notes of it.)

CASE 1.—A healthy-looking young man aged twenty years was admitted under the care of Dr. Green on Nov. 30th, 1892. His previous history was of little importance. There was a vague account of some epigastric pains and flatulence, but while sitting at the theatre he was seized with severe pains in the abdomen "which doubled him up," and he was brought to the hospital on the above date. It was then noted that he was in a condition of collapse. The skin was pale and covered with clammy sweat, the temperature 96° F., and the pulse 100, small and compressible. Severe abdominal pain was complained of, and the abdomen was distended. There was marked tenderness in the epigastric region. There was no vomiting as yet, and flatus was passed per anum. He was treated with morphia and bismuth. Towards the evening his symptoms got worse. The abdominal pain and distension were greater, and he vomited several times greenish, and subsequently stercoraceous, fluid, but no blood was noticed in the vomited matter. On Dec. 1st, after a hypodermic injection, the patient had slept fairly well, but he had vomited several times, and the abdomen was very much distended. I saw him on Dec. 2nd, the third day of his attack. He then had the appearance, and showed the usual symptoms, of one suffering from a serious abdominal malady, and his condition was obviously very precarious. The abdomen was enormously distended, and the main seat of tenderness seemed to me to be below, near the cæcal region. The diagnosis of perforative peritonitis was made, and the opinion expressed that the lesion was situated in the vermiform appendix. Not having seen the case from the commencement my mind was hardly enough impressed with the situation of the pain in the epigastric region in the early part of the case, and hence an error was made in the estimate of the position of the perforation. The abdomen was explored by the usual incision. To my disappointment the cæcum and appendix were found to be normal. The intestines were congested, covered with lymph, enormously distended, and the abdominal cavity full of purulent fluid and some gas without fæcal odour. The incision was made nearly up to the ensiform cartilage, but nothing was made out, for the intestinal distension made examination very difficult, and the desperate condition of the patient forbade delay. The abdominal cavity was therefore washed out and closed. The patient, as is usual in such cases, died about twenty-four hours later, pulseless and collapsed. One could hardly say that the operation did him harm—it certainly failed in doing him any material good. At the post-mortem examination a perforating ulcer was found on the anterior aspect of the first part of the duodenum. The opening was circular in form, about the size of a threepenny-piece, and had thickened, callous edges. This was obviously the cause of the general peritonitis. All the other organs and viscera were healthy.

CASE 2.—This occurred in the person of a strong young man aged twenty-three years who was under the care of Dr. Whipham at St. George's Hospital on June 11th. He had been quite well until five days before admission, when he was seized with violent abdominal pains, vaguely referred to the right side. He had vomited several times, but the bowels had opened twice. Three years ago he had a similar attack and had got well. The significance of this latter statement will be seen further on. I saw him, with Dr. Whipham, soon after midnight. He looked fairly comfortable, but the pulse was very quick and the abdomen greatly distended. The hernial apertures were empty and the rectum was devoid of feculent contents, but a sensation of fluid in the pelvis could be felt through it. No very marked tenderness could anywhere be elicited. When the patient was asked where his worst pain was situated he pointed to the right iliac region. Here also there was tenderness on pressure. Previously on the same night I had operated upon a case of a very similar nature and had found a perforation of the vermiform appendix, and I could not divest my mind of the belief that the present case was due to a similar cause, and thus again fell into error. I may, however, mention that the possibility of duodenal ulcer was actually present to our minds, and we discussed it. The abdomen was opened in the right linea semilunaris, and immediately enormously distended coils of bowel showed themselves, deeply congested and covered with lymph. There was purulent fluid in the pelvis and bubbling of gas, but this was quite devoid of fæcal odour; its reaction to litmus paper was not ascertained. The cæcum and vermiform appendix were with some trouble examined and were found to be normal. So great was the intestinal distension that I opened a prominent coil of jejunum by a small incision and drained away many basinfuls of feculent fluid. The incision was closed with a Lembert suture and the collapsed bowel permitted free exploration of the intestine. Nothing could be found, and in reflecting upon the time that would be consumed by prolonging the incision with the view of finding an ulcer of the stomach or duodenum and repairing it I reluctantly closed the abdomen and left in a glass drainage-tube, having well flushed out the abdominal cavity with warm water. This patient seemed at first much relieved, but on the evening of the day following the operation he had a recurrence of severe abdominal pain and soon died. At the post-mortem examination it was revealed that there was a small ulcer which would admit a quill on the anterior wall of the duodenum, about half an inch from the pylorus. The hole was rounded, with thick discoloured edges. At the same level with the ulcer which had perforated there was a depression about one-third of an inch in diameter, smooth, and the walls not undermined. This was evidently an ulcer which had healed. It was situated on the posterior wall of the duodenum.[4] There was general peritonitis, and a large cavity containing about two pints of brownish fluid was situated above the stomach and below the liver and diaphragm. The abdominal wound had united, and it is especially important to observe that the small incision made to drain the intestine had soundly healed in less than twenty four hours, demonstrating the safety of the procedure of draining distended intestine.

Before proceeding to the discussion of the general question of duodenal ulcer I will shortly quote abstracts of two cases strikingly similar to those first related, which demonstrate the fact that I do not stand alone in the diagnostic difficulties which surround perforating ulcer of the duodenum. Perry and Shaw in their recent article state that laparotomy was thrice performed at Guy's Hospital for perforative ulcer of the duodenum, but the lesion was never found. Lockwood[5] relates the following cases of great interest in the Medical Society's Transactions. The first case was that of a young man aged twenty-eight years who was suddenly seized with acute pain on the left side while drinking a cup of tea. This was thought to be an attack of colic, and treated accordingly. Vomiting and tympanites with complete obstruction supervened, but there was no hæmatemesis. On the third day an exploratory abdominal section was performed, and a quantity of foul-smelling gas escaped, while general purulent peritonitis was present. The whole intestine was examined, but no perforation was found. The distended gut was opened and drained, and the opening closed by a Lembert suture. The abdomen was flushed out. The patient died in seven hours. The chief focus of septic peritonitis was found below the liver, and upon the front part of the duodenum was a small oblong aperture, which gave exit to the duodenal contents. The second case was that of a man aged forty-one years who while at his work was suddenly seized with violent pain in the abdomen followed by complete constipation and sickness. The vomited matter was at first the contents of the stomach, and afterwards of a stercoraceous nature. When first seen the abdomen was tympanitic and no vermicular movements were detected. The countenance was anxious and the man complained of severe abdominal pain. The pulse was 120 and the temperature 99° F. The abdomen was explored through the usual incision. Diffuse

[4] Post-mortem and Case Book, St. George's Hospital, 1894.
[5] Transactions of the Medical Society of London, vol. xv., p. 91.

septic peritonitis was found, but although every region was searched nothing could be found to account for its occurrence. The man died in ten hours, and Dr. Galloway, who made the post-mortem examination, found the most intense focus of inflammation beneath the liver. The first part of the duodenum was perforated by an ulcer, which had sloping edges, situated about an inch from the pylorus.

The abstracts of these two cases clearly show that the diagnostic difficulty felt by myself and illustrated in the instances I have narrated is shared by other surgeons; and now that it is recognised that the prompt treatment of perforating gastric ulcers by abdominal section saves life the present time seems peculiarly opportune for drawing the attention of the profession to perforating ulcers of the duodenum, which so closely resemble them. It has seemed to me that the compilation of statistical tables as to the comparative frequency of duodenal ulcer or of certain of its more marked clinical features would be open to many sources of inaccuracy and would serve little useful purpose. The undoubted fact that the scars of duodenal ulcers are sometimes accidentally met with post mortem shows that this condition may not infrequently be recovered from when perforation does not occur, and is a proof that many cases are accidentally overlooked. Perforating ulcer of the duodenum is no doubt a rare affection, and a proof of this statement is found in the observations of Norman Moore,[6] who finds that only three cases are recorded in the St. Bartholomew's Hospital post-mortem books between 1867 and 1882, a period of sixteen years. Two of these occurred in men, and showed the usual features of sudden and unsuspected onset. In one of them the ulcer was not even suspected during life. It seems clear from the elaborate researches of Dr. Perry and Dr. Shaw, as well as from the perusal of these cases, that the ulcer is almost invariably found on the anterior surface of the first part of the duodenum. Out of 57 cases of rapidly perforating ulcer collected by them the lesion was situated here in 48. I am greatly indebted to valuable assistance from Mr. Arthur Latham in looking up the question of the frequency of duodenal ulcers in the post-mortem books of St. George's Hospital. He finds that in 8192 post-mortem examinations in the thirty-one years from 1863–1893 there were 116 cases of death from perforation of the intestine (from all causes save rupture); that is, 1·4 per cent. of total deaths. These 116 include 12 cases of perforating duodenal ulcer — that is, 0·14 per cent. of total deaths and 10·34 per cent. of all perforations.

Cases of Perforating Duodenal Ulcer.

—	Year.	No.	Sex.	Age.
1	1892	157	Male	34
2	1891	306	Female	27
3	1890	404	Male	21
4	1889	206	Male	37
5	1887	165	Male	42
6	1883	225	Male	49
7	1882	235	Female	22
8	1878	190	Male	59
9	1875	172	Male	50
10	1875	175	Male	52
11	1871	34	Male	56
12	1871	42	Male	56

Out of these 12 cases ten occurred in males and only 2 in females. The average age is forty-two years. Out of the 116 cases of intestinal perforation, of non-perforating ulcers of the duodenum, or congestions threatening to perforate, there were found 23 instances which may be thus arranged: burn with slight ulceration or congestion and early erosion, 7 cases; associated with renal disease, 6 cases; phthisis and tuberculosis, 2 cases; malignant ulceration, 1 case; associated with scirrhus of pancreas and liver, 2 cases; and associated with pleurisy, 1 case. The remaining four cases had no obvious causes. In 9 of the 12 perforating cases the ulcer was situated anteriorly; in 3 the situation was not mentioned. I propose (1) to briefly consider the views taken by pathologists as to the formation of these ulcers and to illustrate their pathological terminations; (2) to pass in review their various clinical symptoms, illustrating my remarks when possible by abstracts of cases; (3) to discuss the appropriate treatment; and (4) to draw conclusions which may seem warranted by the present state of our knowledge.

It is well known that the formation of ulcers in the stomach and duodenum has long engaged the attention of eminent pathologists. Rokitansky[7] regards tuberculous ulceration of the duodenum as very rare. He refers his readers for the pathology of perforating duodenal ulcer to his account of a like process occurring in the stomach.[8] He states his belief that these ulcers commence as an acute, circumscribed, red softening, or with a circumscribed sloughing of the mucous membrane. He speaks of the now well-known usual terminations by cicatrisation, perforation, hæmorrhage, permanent contraction, matting, and condensation of tissues round. It will clear the way at the outset to exclude all causes of ulceration of the duodenum from without, as by gall-stones, the pressure of malignant growths, the slow erosion of an aneurysm, or a renal abscess or suppuration in connexion with spinal caries.[9] Instances of all these conditions will be found scattered through pathological literature, but are hardly germane to the subject under consideration. Ziegler,[10] while looking upon the duodenal ulcer as essentially similar in its pathology to ulcer of the stomach, well points out that the latter ulcers, and therefore the duodenal ulcers also, may be caused by any kind of local injury of the mucous membrane which exposes it to the unchecked action of the gastric juice, not yet neutralised in the first part of the duodenum, where these ulcers usually commence. Probably the commonest causes of obstructed blood-supply, leading to necrosis of the mucous membrane, are venous engorgements, hæmorrhages, arterial anæmia from embolism, spasmodic contraction, or arterial sclerosis. What share such morbid conditions as cardiac and renal changes, alcoholism, syphilis, and Bright's disease may have in bringing about these conditions would be too wide an inquiry for the scope of this paper. A word, however, must be said as to the undoubted occasional association of ulceration of the duodenum with albuminuria and renal degeneration, as so ably pointed out by Dr. Dickinson. In the post-mortem and case book of St. George's Hospital for 1890 will be found four such cases where ulcers were found in the duodenum, and in one instance in the cæcum also, in association with the large white kidney and interstitial nephritis. The symptoms during life were vague, and the sickness and diarrhœa might well be attributed to other causes. Perry and Shaw found no less than twelve cases of ulcer of duodenum out of seventy associated with Bright's disease. There seems no distinct proof that albuminuria is associated with the rapidly fatal perforating ulcer which we are principally considering, though of course it may be a predisposing cause.

The association of ulcer of the duodenum with burns and scalds has long occupied the attention of pathologists. It is very remarkable that modern investigators have cast doubts upon this association, and there can be no question that this phenomenon is much rarer now than was formerly the case. Curling's well-known paper in the Transactions of the Royal Medical and Chirurgical Society[11] relates ten cases of this lesion associated with burn, while Hewitt still earlier[12] found three instances of ulceration of the duodenum in seventeen fatal cases of burn examined at St. George's Hospital between the years 1844 and 1846. So Holmes,[13] writing in his System of Surgery, relates sixteen lesions of the duodenum in 125 cases of burn. The age of the patient and the period of death varied extremely. The appearance, says the latter writer, is that of a perfectly indolent ulcer. It is usually situated just below the pylorus; often there are two or three close together. ..... They look as though a portion of the mucous membrane had been cut out. This writer also refers to the frequent absence or vagueness of symptoms, and where severe manifestations, as melæna, hæmatemesis, and signs of perforation, occur he seems to think the prognosis highly unfavourable. Curiously enough, from an early period doubts commenced to be thrown upon the association of duodenal ulcer in association with burns.

[6] Ibid., vol. xxxiv., p. 98.

[7] Pathologische Anatomie, vol. ii., p. 103.

[8] Ibid., p. 30.

[9] Davies-Colley: Transactions of the Pathological Society of London, vol. xxxvii., p. 581.

[10] Ziegler's Pathologische Anatomie, pp. 471 and 459.

[11] Vol. xxv., p. 261 et seq.

[12] Transactions of the Royal Medical and Chirurgical Society, vol. i., p. 259.

[13] Holmes' System of Surgery, vol. i., p. 394.

Thus WILKS,[14] writing soon after Curling, made a careful examination of twelve fatal cases of burn and found no lesion in the duodenum. He contrasts his experiences with those of Curling, but gives no explanation of the discrepancy. McCarthy,[15] relating a fatal case of duodenal ulcer from vomiting and hæmatemesis in a girl aged seven years, states that this complication is rare at the London Hospital, only one case besides the one he mentions having occurred for eight years. Lockwood has recently been investigating this subject, and I have his authority for stating that out of 138 fatal cases of burn occurring in the last nine years at St. Bartholomew's Hospital only one had ulcer of the duodenum, although the pathologist had obviously been on the alert to detect duodenal lesions. Perry and Shaw, in the Guy's Hospital Reports for 1894, found 5 cases of duodenal ulcer in 149 cases of burn. In reviewing all the cases of burn ulcer, they find it more frequent in females than in males; this they ingeniously attribute to the burnt surfaces being usually, from the arrangement of the clothes, more extensive. Quite recently also some of the more advanced of the younger school of pathologists have stated disbelief in the relationship between burns and duodenal ulcers. The conclusion is irresistible that some surgeons, especially in former times, had experience of a condition which now seldom exists. The explanation is probably in the direction of sepsis, and the improved methods of cleanliness at present in vogue regarding the treatment of burns. The profuse diarrhœa which accompanies extensive and dirty burns is very suggestive in this respect, and so are the patches of hæmorrhagic congestion and inflammation so often found in these conditions through the small intestine. It is easy to understand that if one of these patches occurred in the first part of the duodenum the unrestrained action of the powerful gastric juice not yet neutralised by the bile might readily cause rapid ulceration and perforation. It is striking that ulceration of the duodenum should also have been found in cases of frostbite.[16] Thus Samuel Adams, an assistant surgeon in the United States Army, relates the case of a private aged thirty-six years, who was confined in the guardhouse awaiting his trial by court-martial when both his feet became frostbitten, and when first seen gangrene had already set in. After being in the hospital for a week diarrhœa ensued, with rapid exhaustion. The line of demarcation formed, but the patient died exhausted in about three weeks. At the necropsy the duodenum was found covered with small irregular ulcers with rough serrated edges extending in different directions. It will be observed in connexion with this case that the conditions found in bad burns of sloughing and septic tissues were present, and the explanation is probably the same—namely, an infarction of the vessels of the mucous membrane due to septic emboli, and the consequent unrestrained action of the gastric juice. Post-mortem examinations upon cases of septic ulceration after frostbite have not been very frequent, or possibly duodenal ulcer may have more commonly been found. That ulcers of the duodenum in such septic conditions as burns are due to septic embolism of some small vessels in the intestinal walls seems a more rational explanation than the old theory of hyperexcitation and inflammation of Brunner's glands. Looking upon such embolic processes as almost accidental, it is easy to understand how several cases may occur in the experience of one surgeon and none in the experience of others, and hence very erroneous estimates may be adduced as to the comparative frequency of duodenal ulcer after burns. There is one point which it seems to me is not sufficiently thought upon regarding the formation of duodenal ulcers, and that is the probability of their origin in actual traumatism of the intestinal coat by some hard or irritating substance, such as a piece of bone which escapes stomach digestion. In this way, it seems to me, are best explained those mysterious cases where the first symptoms are those of perforation, and which occur in healthy young adults. Professor Axe of the Veterinary College states, however, in a letter to me upon the subject, that though he has made hundreds of post-mortem examinations upon the carnivora generally he has never observed a death from perforation of the duodenum. While rectal ulcers are not uncommon, all writers on ulceration of the stomach and duodenum agree on the comparative frequency of duodenal ulcers in young males. I can hazard no explanation of this very curious fact, unless it be the greater frequency of haste in eating and "bolting" indigestible food, but its clinical significance is of the first import. Trier of Copenhagen, who wrote a very comprehensive paper on this subject,[17] collected twenty-six cases of perforating ulcer of the duodenum from the records of the Frederik's Hospital. He also collected a number of cases from other sources numbering altogether 261. He found that the ulcer was situated in the duodenum in 10·7 per cent. of cases, and he concludes that the ulcer most generally occurs about the age of manhood, the average being about forty-two and a third years. A striking similarity has been observed in the Guy's Hospital and the St. George's Hospital estimates. Brinton,[18] in discussing the large number of 654 cases of ulcer of the stomach and duodenum, makes the proportion of stomach ulcer in females over males as 2 to 1. Trier finds that the ulcer of the duodenum is found five times more frequently in males than in females.[19] Perry and Shaw conclude that, excluding burns, duodenal ulcer is three times as common in males as in females. Moore's cases[20] show a contrast to those of Brinton, for out of thirteen cases of gastric ulcer reported by him, occurring in a period of twelve years, ten occurred in males and three in females. There was only one case of ulcer of the duodenum, and this was, as usual, in a male, a young man at Lewes about twenty years of age, who for several weeks had severe pains about two hours after taking food. After a meal of pickled salmon very violent abdominal agony came on, and he died collapsed in fourteen hours. The association of ulceration of the duodenum with malignant disease would appear to be very exceptional. Bristowe, in describing the pathological appearance found in a case of general cancer, found a perforating ulcer of the anterior surface of the duodenum, close to a cancerous mass the size of a pigeon's egg. The ulcer seemed to have no direct connexion with the growth, but the latter probably acted by lowering the nutrition of the part. In the list of affections of the duodenum collected by Latham there are three in relation with malignant disease.[21] Typhoid ulcers in the duodenum and the ulcers associated with anthrax or pemphigus are among the rarities of pathology and need not here be further discussed.

I will now consider the pathological terminations of duodenal ulcers. The ulcer which I am especially considering, and which may well be termed "latent," goes on to rapid perforation and death. Ulcers which are more chronic in their course may exhibit a large number of different terminations and conditions. In a considerable number of cases the ulcer erodes into the pancreas and some large vessel, the patient dying from hæmatemesis. This is a peculiarly common termination of the duodenal ulcer after burns, and most of our museums contain specimens to illustrate it. Duodenal ulcers may cicatrise and the gut recover its normal functions. On the other hand, the calibre of the bowel may be seriously lessened and contracted. Thus Lange[22] relates the case of a woman who, after suffering from great mental troubles in digestion disturbances, passed blood in the stools and exhibited symptoms of gastric ulcer, for which she was treated. Eight years after she was operated upon for stricture of the pylorus, as she vomited constantly and had a dilated stomach. The pylorus was normal, but the duodenum was so narrowed about an inch from the pylorus as barely to admit a lead pencil. The stricture was divided and stretched and the patient made a good recovery. When a chronic ulcer of the duodenum threatens to perforate such matting and condensation of the tissues may surround it that the appearance and symptoms of cancer are closely simulated. Billroth is said to have excised the pylorus for cancer when simple ulcer was really present. A specimen of ulcer of the duodenum, where the symptoms closely resembled cancer, occurring in a man aged thirty-six years, is related and described by Gairdner.[23] Stricture of the bile-duct with persistent jaundice caused by the cicatrisation of chronic duodenal ulcer is sufficiently well known not to need further mention here. An exceptional association of stricture of the duodenum after cicatrised ulcers is the formation of hernial-like pouches in the immediate vicinity. Specimens of this pouched condition of the bowel have

[14] Guy's Hospital Reports, 1856.
[15] Transactions of the London Pathological Society, vol. xxv., p. 120.
[16] American Medical Times, Feb. 28th, 1863.
[17] British and Foreign Medico-Chirurgical Review, p. 157, 1864.
[18] Diseases of the Stomach.
[19] Loc. cit., p. 160, 1864.
[20] Transactions of the London Pathological Society, vol. xxxi., p. 110.
[21] Ibid., vol. xxi., p. 356.
[22] Annals of Surgery, p. 588, 1893.
[23] Transactions of the Glasgow Pathological and Chirurgical Society, v. i. iii.

been exhibited and related by Charlewood Turner.[24] He attributed the conditions found to spasmodic contractions of the bowel in the vicinity of the stricture. I have already referred to the fact that tuberculous ulcer of the duodenum is considered rare. A case is, however, related by Murchison,[25] where a simple ulceration of the duodenum was followed by tuberculous mischief in the lungs. Two of the cases from the St. George's Hospital post-mortem books are noted to be in association with tuberculous ulceration into the portal vein with profuse hæmatemesis and death is an exceptional termination, noted by the late Dr. Habershon.[26] Perhaps the rarest termination of duodenal ulcer is a communication with the colon. Murchison[27] speaks of this very exceptional condition, and a case of it is related by Saunderson[28] in the person of a man aged thirty years, who was admitted into the Middlesex Hospital complaining of excessive pain in the epigastrium and vomiting a brown pultaceous liquid. He had had four similar attacks with severe pain after meals. The ulcer in the first part of the duodenum was found to communicate with the colon.

This brief consideration of the pathological terminations of duodenal ulcer will serve to illustrate how various must be the clinical symptoms they present, according to whether adjacent vessels, nerves, or viscera are implicated. A conjectural diagnosis is usually only warranted, and clinically it is probably impossible to distinguish them from pyloric ulcers unless such symptoms as obstructive jaundice or the pain coming on some two or three hours after food should point to the duodenum. Ulceration of the duodenum may be exceedingly chronic. Thus Arnold in the Boston Medical and Surgical Journal[29] reports the case of a man who for six or eight years had suffered from such symptoms as epigastric pains, cramps, nausea, and vomiting. His meals were retained without pain, but about four hours later he used to have pain and vomit. If nothing was eaten he would occasionally vomit a quantity of whitish sour liquid. Hæmatemesis with blood in the stools preceded his death, and an ulcer was found in the first part of the duodenum, eroding the pancreatico-duodenal artery. The hæmorrhage in the stools and in the vomit may readily give rise to an erroneous diagnosis. Mr. Leopold Hudson of the Middlesex Hospital informs me that he performed a necropsy on a man aged forty-two years in the year 1889. This patient had suffered during life from repeated intestinal hæmorrhage, which was believed by some eminent physicians to be due to cirrhosis of the liver. At the post-mortem examination the liver was found to be normal, as was also the stomach; but on the anterior wall of the duodenum just beyond the pylorus a large solitary ulcer was found. The floor was formed of very little more than the peritoneal coat, the edges were clean cut, and the open mouth of a small artery was apparant. There was no appreciable thickening of the surrounding tissues, and there were no adhesions. As regards the treatment of these more chronic cases of ulcer of the duodenum, when medical measures fail it becomes a question whether an exploratory abdominal section should not be performed. Thus a communication may be made between the dilated gall-bladder and the small intestine when the duct is obstructed by a cicatrised ulcer. The following case, related by Codivilla,[30] shows that chronic duodenal ulcer accompanied by distressing symptoms is amenable to surgical treatment. A man aged forty years had for fifteen years suffered with pain in the epigastrium coming on five or six hours after dinner and attaining its maximum during the night. There was also daily vomiting, the vomited matter containing acid and bile and blood. Blood was also passed per anum. Every variety of medical treatment had been tried without avail. At the urgent request of the patient an operation was performed. No lesion was found in the stomach, but two fingers' breadth below the pylorus the duodenum was transformed into a hard mass five centimetres long with numerous adhesions. A coil of the jejunum was picked up and sutured to the stomach. The patient recovered well and increased in weight. Five months afterwards he was able to resume work. He still notices a dragging sensation at the situation of the scar and only then has vomiting, but he has vomited no more blood. Codivilla claims priority for treating duodenal ulcer in this way, and points out that gastro-jejunostomy gives the portion of diseased bowel rest and lessens the dangers of perforation or hæmorrhage. But few cases exhibiting chronic symptoms will probably be treated by the surgeon, though the excision of a chronic ulcer and suture of the bowel are obviously well within the range of modern operators.

The symptoms and diagnosis of the acute perforating ulcer must next engage our attention. In a considerable number of cases the ulcer is absolutely latent, resembling gastric ulcer in this respect. A patient is suddenly seized with agonising abdominal pain, rapid tympanites ensues, and he dies in eighteen or twenty-four hours in profound collapse. There may or may not be vomiting. In other cases there is a tendency towards encysting of the extravasated material and the formation of a subdiaphragmatic abscess. In the majority the symptoms are primarily epigastric or in the right hypochondrium, and this, if it can be clearly elicited, is a diagnostic point of the first importance. In a certain proportion of cases the patient will tell us that he has had similar attacks before, or has had pain and vomiting some hours after meals, again drawing attention to the epigastric region. There is one source of error here. When the intestine is perforated the patient often refers his pain to the patch of peritoneum first inflamed by the contact of the septic fluid. Thus it happens that in a perforation of the cæcum the pain may be attributed to the centre of the abdomen, and in perforation of the duodenum the extravasated contents, flowing towards the pelvis, may first inflame the peritoneum in that locality. A case is related by the late Dr. Barclay[31] in which it is expressly stated that intense pains occurred on pressure, and were referred to the lower part of the abdomen, and the same point is observed in one of the cases I have related. The violent colicky pains attendant upon perforation of these ulcers render the case very likely to be mistaken for lead colic, especially when they occur in the person of a painter. Thus a case is related by Hadham[32] where a painter aged fifty-six years was admitted into St. George's Hospital suffering from violent abdominal pain. He was writhing about, but pressure gave him slight relief; and he had a well-marked blue line on the gums. He was treated for lead colic, but vomited several times, and died fourteen hours after admission. At the post-mortem examination a small clean-cut ulcer was found on the anterior surface of the first part of the duodenum. In these cases the progressive abdominal distensions and vomiting, and the usual signs of grave abdominal mischief should warn the practitioner, but the mistake is one that may readily be made. In like manner confusion may arise between perforation and intestinal obstruction. The distinctions between these conditions are discussed by numerous writers, and I would now content myself with only pointing out the primary importance of getting a sense of fluctuation per rectum, as indicating free fluid in the pelvic cavity. In perforative peritonitis occurring suddenly in either sex with a clear history of epigastric or right hypochondriac symptoms, as previous pain and vomiting, or primary occurrence of the pain about the epigastrium, with tenderness on pressure, the perforation is likely to be in the duodenum in males or near the pyloric end of the stomach in females; and in such cases it seems to me best to make an incision over the affected area. The character of the fluid that escapes may give most important aid. In perforations of the cæcum the pus is intensely foul and the puffs of gas which escape distinctly feculent. In ulcers of the duodenum this would probably not be the case, and though one can hardly argue from two instances the cases I have related show the absence of any feculent smell or odour in the abdominal contents. This may prove to be a valuable diagnostic sign in the future, and I would here draw prominent attention to it. The reaction of the fluid in the peritoneal cavity should of course be acid in cases of perforation of the first part of the duodenum, but the peritoneal exudation must be excessive and would soon neutralise any acidity, so that this test will not stand universal adoption. Nevertheless, acid fluid was found in one of the Guy's Hospital cases related by Perry and Shaw. A word must here be said concerning the researches into the diagnosis of intestinal perforation by Senn of Milwaukee.[33] This authority points out that if the stomach be distended with hydrogen gas and a perforation exists, the gas passes

[24] Transactions of the London Pathological Society, vol. xxxv., p. 201.
[25] Ibid., vol. xx., p. 174.
[26] Ibid., vol. xxvii., p. 155.
[27] Edinburgh Medical Gazette, pp. 4 and 127, 1857.
[28] Transactions of the London Pathological Society, vol. xiv., p. 174.
[29] Vol. xcviii., xcix., p. 407.
[30] Colonial Quarterly Journal of Medicine and Surgery.
[31] THE LANCET, March 18th, 1871.
[32] THE LANCET, Feb. 18th, 1871.
[33] Senn's Abdominal Surgery, p. 249.

into the peritoneal cavity, distends it, and the liver dulness disappears, which he considers diagnostic. I would point out that disappearance of liver dulness is not unknown in excessive tympanites, and that therefore I can hardly assign the same weight to this test as expressed by the distinguished American surgeon. The escape of bubbles of gas on pressure when the abdomen is opened may lead one directly to the source of perforation. This symptom was of marked aid in the case related to the Medical Society of London last year by Mr. Percy Dean, and in which that surgeon demonstrated the feasibility of resection of a duodenal ulcer and suture of the bowel, his patient recovering. Similarly Mr Pearce Gould related a case at last year's meeting of the British Medical Association where a young woman aged twenty years, after a meal of fruit, was seized with severe pain in the right hypochonium, with subsequent collapse and vomiting. Twenty-six hours after the onset of acute symptoms he operated, and as there was nothing to indicate the seat of the perforation he opened the abdomen below the umbilicus. Gas and acid fluid escaped. So, having rapidly explored the generative organs and vermiform appendix, Mr. Gould cut down on to the stomach above the umbilicus and immediately exposed a small perforation in the duodenum. This he excised, carefully sutured the wound so made, and having flushed out the peritoneal cavity closed the laparotomy wounds, leaving a glass drain in the lower incision. At the close of this operation the patient was in a state of profound collapse, being very nearly pulseless at the wrist. Thirty-two ounces of saline solution were injected into one of her veins, and he had the satisfaction of seeing this collapse pass off to a considerable extent. Nevertheless, nine hours later she died; and at the post-mortem examination he found that the duodenal suture was firm, that no water escaped from the bowel even under considerable pressure, but that there was general peritonitis. "It was no satisfaction to me," Mr. Gould remarks, "no benefit to my patient, that the suture was firm, while her peritoneum had been left foul. It was only a surgical illustration of the vulgar proverb which cautions us against closing the stable-door when the steed was stolen." I have made in the post-mortem room of St. George's Hospital a series of observations on the best position for placing the incision in the abdominal parietes in supposed mischief about the duodenum. The incision in the median line does not give free access to the right hypochondriac region, and one can easily conceive that it might be difficult to detect and to suture a duodenal ulcer through it. In like manner an incision in the right linea semilunaris appears to be too far external to give access to the pylorus and first part of the duodenum. A vertical incision four to five inches long, according to the thickness of the parietes, from the right eighth cartilage downwards, two inches to the right of the median line, is in the majority of instances over the duodenum. Such an incision enables one to explore the pylorus, duodenum, gall-bladder, and under surface of the liver, and through it an ulcer on the anterior surface of the duodenum could be easily reached. I would draw attention to the immense advantage of holding asunder the margins of the abdominal wound in this and similar proceedings by means of stout silk loops passed through the parietes. By this means exploration can be most thoroughly managed, and the manœuvre greatly facilitates the return of distended bowel. I would also venture to express my opinion that the secret of success in these cases is the complete after-cleansing of the peritoneal cavity. Mr. Gould strongly expresses himself regarding this point, but I cannot now enter into this subject beyond expressing the belief that our present methods are not sufficiently complete and elaborate.

In conclusion I would draw attention to the following points, which seem clear from a perusal of the published cases of this affection. 1. That in perforative peritonitis there is nothing to point to the duodenum as the site of lesion unless it is clearly made out that the onset of pain was in the epigastrium or right hypochondrium; or that previous epigastric symptoms, as pain and vomiting, had occurred. Great care should be taken over the investigation of this part of the history, which is most vital and important. 2. That, considering the frequency of duodenal ulcer in males, the possibility of this affection should always enter the minds of surgeons who are called to a case of perforative peritonitis occurring in a man. 3. That the non-feculent and sometimes acid nature of the extravasated fluids and gas may serve as a most important diagnostic aid, and the incision may be made small as an exploratory effort only until this vital point is made clear. When once the surgeon has made up his mind that the exudation is non-feculent, and especially if it be acid, the region of the stomach and duodenum should be explored without loss of time. The nature of the fluid is a matter for future observation. 4. In severe shock it is perhaps well to wait for a few hours. The peritoneum must be most energetically washed with warm water, and a drainage-tube placed in the pouch of Douglas would probably be of utility.

Cavendish-place, W.

TOBACCO AMBLYOPIA.[1]

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THOUGH it has long been known that the excessive use of tobacco is injurious to the eyesight, it is only within comparatively recent years that the visual disturbances arising from the toxic effects of nicotine have been carefully studied and their clinical features accurately recorded. Many of the older ophthalmic surgeons[2] used to ascribe to tobacco poisoning a large number of obscure forms of disordered or suspended visual function, in which the etiology of the disease should have been assigned to some entirely different cause. The somewhat wholesale condemnation of the use of tobacco to which this idea gave rise has still a widespread currency, and by those who have the slightest thought that they smoke in excess no question is more commonly put to their medical attendant than, "Is it tobacco that is doing me harm?" or "Must I give up smoking?" Though the existence of amblyopia from this cause can no longer be doubted the disease must, considering the large number of people who habitually use tobacco, be admitted to be of comparatively rare occurrence, nearly all the cases that come under observation being more or less complicated by free indulgence in alcohol. As to the frequency of nicotine amblyopia it is, therefore, difficult to arrive at very accurate conclusions; it probably, indeed, varies in different countries, and is in large part regulated by the habits and customs of different nations. Just as there are people so constituted that even excessive indulgence in tobacco and strong drink has on them no appreciable effect, there are others in whom, owing to some peculiar idiosyncrasy, even the most moderate use of either produces marked toxic disturbances. Of all the cases observed by Horner[3] during a period of two years 0·7 per cent. were due to abuse of tobacco and alcohol; while Galezowski[4] found 1 per cent. in a total of 36,000 patients. Though the introduction of the ophthalmoscope shed new light upon the site and the anatomical cause of many cases formerly grouped under the general names of amblyopia and amaurosis, yet amblyopia arising from the abuse of tobacco and alcohol presents in its earlier stages no ophthalmoscopic picture that can be regarded as pathognomonic. In such cases, indeed, the contrast between the gravity of the symptoms and the absence of any marked lesion that ophthalmoscopic examination can detect is one of the most striking characteristics; and our knowledge has been derived rather from careful examination of symptoms, more especially of the limitations of the visual field and of defects in the colour sense, than from any changes that can be detected in the optic nerve and retina.

In the following case, first seen in December, 1888, we have a good example of amblyopia due clearly to the toxic influence of tobacco. A man aged fifty-nine years complained of dimness of vision in both eyes. Though the defect had only attracted serious attention somewhat suddenly about eight weeks before, I was able to elicit the fact that for twelve months he had had difficulty in recognising the features of friends unless they were quite close to him. He had become less and less able to read small print, and found that no spectacles he could get brought about any

[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society, Nov. 9th, 1894, and illustrated by charts and diagrams.

[2] Mackenzie: Diseases of the Eye, p. 1065. 1854.

[3] Ueber Intoxikations-Amblyopie: Schweizer Correspondenzblatt, 1878, viii., 13, p. 396.

[4] Des Amblyopies et des Amauroses toxiques. Paris, 1879.

improvement. When he was walking along the street at night the flame in a gas lamp would seem suddenly to go out, but would again become visible as he approached nearer, while another then seemed to disappear. The flame of the lamps always appeared to him to be of a blue colour. The defect in vision was as pronounced in one eye as in the other, and when I saw him he could barely read the letters in No. 19 Jaeger, and his vision for distance was not equal to $\frac{1}{6}$ by Snellen's test types. He had never suffered from any pain in his eyeballs, and there was no tenderness when the ball was pressed backwards into its socket. The intraocular tension was normal, the movements of the eyeballs were perfect, and the pupils were of equal size and responded normally both to the stimulus of light and in the act of convergence. By careful examination it was demonstrated that the dimness of sight was wholly confined to the central area of the field of vision, and that when the confines of this dull area were reached the vision of the other parts of the field was normal quite up to the periphery. In the affected central area colour sensation was also entirely absent. Ophthalmoscopic examination revealed no lesion to account for the intensity of the symptoms, and beyond the fact that the left optic nerve was rather paler than the right there was nothing to be noted. The patient (a foreman in a large printing establishment and most regular in his attendance in the workshop) was a strong, healthy-looking man, who had never suffered from any other illness than some slight digestive disturbances. He had, however, in consequence of domestic difficulties been subjected for many months to much mental anxiety, and he himself attributed the onset of his defective vision to "indigestion and worry." Though he had begun to use tobacco when only nine years old, and had smoked regularly thereafter, he was not conscious of having ever suffered in any way from this cause, even the sickness usually attendant on the first experiences of nicotine having been in his case remarkably slight. For more than forty years he had smoked on an average about four ounces of black twist every week; but of late, though for no particular reason, the quantity had been less—probably about three ounces. He invariably smoked before breakfast, but as he was always regular with his meals that was the only time when he smoked with his stomach empty. He had always been very abstemious, and for the last fifteen or sixteen years had never tasted alcohol. The patient was advised to abstain from the use of tobacco; but finding that impossible he substituted a very light quality for the black twist, and limited the quantity to two ounces a week. A dose of one-sixteenth of a grain of bichloride of mercury with five grains of iodide of potassium, to be taken after meals, was prescribed for him, and when he was seen again after four weeks' treatment he reported that for more than a fortnight there had been a progressive improvement in his eyesight. Tested by Snellen's types, it was found that the visual acuity was now $\frac{1}{4}$ of the normal instead of $\frac{1}{18}$, as at first. Aided by glasses he could read moderately large print; and although he could now distinguish blue and yellow, yet in the central area of the field of vision sensation for red and green was still absent. The former appeared to him "like silver," while the latter "glittered like gold." When, however, he was shown a gold and a silver coin he was unable to distinguish the one from the other until he had felt the difference in weight. He had by this time no difficulty in counting all the street lamps. There was no change in the ophthalmoscopic appearances. Caution in the use of tobacco was again enjoined, and for the biniodide of mercury a Plummer's pill at bedtime was substituted, with a quinine and strychnine tonic before food. After a two months' holiday in Ireland—during which he smoked regularly, but also took his medicine steadily and kept out of doors as much as possible—his vision was found to have improved to $\frac{2}{3}$ of the normal. He continued to take a tonic mixture containing nux vomica, and six months after the date when I first saw him he resumed his duties and was able, although with a little difficulty, to read proof sheets as formerly. At the first glance red and green spots still appeared to him to have a metallic lustre, but after he had looked at them for a few seconds the colours became quite distinct. He had now not the slightest difficulty in at once distinguishing between a sovereign and a shilling. His own comment was that he could now see the colour in a person's face and in the skin of his own hands, whereas three months before he could distinguish no ruddy tint, the appearance presented to him being "just like that of a dead person," and as he walked along the streets the faces of the passers-by wore a "deathly pallor," and he was "unable to distinguish their eyes." The patient continued regularly at work till May, 1893. While he still abstained from alcohol, he had begun to use tobacco almost as freely as he had been doing before his illness, although the quality was not so strong. As his sight was again beginning to fail he gave up his situation. He found that his vision varied greatly and was uncertain—"some days he could not see well, at other times he was able to read well enough." He came under treatment again in September, 1894, when it was found that his visual acuity varied between $\frac{1}{4}$ and $\frac{1}{2}$ of the normal; there were slight central amblyopia and partial colour defect—at one time he could tell all the colours, while at others he hesitated with red and green, and when the dyschromatopsia was most pronounced his vision was least acute. It was now noticed, however, that there was a slight peripheral contraction of the visual field, the optic discs were pale, more especially in their outer two-thirds, and very well defined in outline, the retinal arteries were somewhat reduced in calibre, but the veins were of normal size. Strict injunctions were again given as to the use of tobacco, and a mixture containing nux vomica and iodide of potassium was prescribed. After a fortnight's treatment the power of vision became steadier, but it has not yet (November, 1894) improved up to the point it had reached after his first attack.

I have recorded this case in full because from many points of view it is typical and illustrative, and because I have had an opportunity of observing it regularly from the beginning. First of all, it is a pure tobacco case, as for nearly twenty years the patient has almost entirely abstained from alcohol, and it proves that recovery up to a certain limit can take place even although the patient continue all through to use tobacco of light quality and in reduced quantity; but it also proves that when the use of tobacco is unduly increased a relapse will follow, while the addition of a concentric contraction of the visual field to the group of symptoms originally noted suggests that, as a result of the prolonged irritation of the tobacco, what was at first a mere functional disturbance has become changed into an organic disease of the optic nerve. In cases of nicotine amblyopia the patients are usually men of from forty to sixty years of age who have used the stronger forms of tobacco for a number of years.[5] The onset of the symptoms, though sometimes sudden, is usually so slow and gradual that patients have difficulty in determining the exact date of commencement. Those affected, unless suffering from debility arising from some other cause, usually present a strong healthy appearance; but the perception of the peculiar odour mentioned by Mr. Doyne[6] may sometimes direct attention to the true nature of the case. They rarely admit ill-health; but questioning brings out that for some time before the dimness of vision was first observed they had been worried and sleepless, and had suffered from loss of appetite and digestive disturbances. In most cases the patients say that they have recently been smoking less; and Förster[7] believes that tobacco is not so well tolerated during the second half of life as during the period of full vigour. All experience, too, goes to prove that those who are well nourished, sleep well, and in general take life easily are able to use much larger quantities of tobacco than those who are not so favourably circumstanced, and that there are some who as a result of congenital predisposition are unable to use even small quantities without suffering from symptoms of nicotine poisoning. Workers in tobacco factories who neither smoke nor chew seldom suffer from amblyopia, and van Millingen[8] of Constantinople affirms that he has never met with a case among the Turks. He thinks this is accounted for rather by their smoking cigarettes than by their using mild tobacco, and comes to the conclusion "that tobacco poisoning is only possible when nicotine in solution is brought into contact with the mucous membrane of the mouth and swallowed." The poisonous effects may, however, as suggested by Dr. Lauder Brunton,[9] rather be produced by the volatile alkaloids formed during the combustion of tobacco. As much stronger tobacco can be smoked in the form of a cigar than in a pipe, cigar and cigarette smokers are probably more exposed to

[5] There are exceptional cases where visual defect showed itself very shortly after smoking or chewing was begun. Some few cases in women are also reported. (See Transactions of the Ophthalmological Society, vol. vii., 1887.) The youngest of my own patients was a man twenty-eight years of age, who had for several years smoked eight ounces of strong black twist every week.

[6] Moorfields Hospital Reports, 1889.

[7] Jahresbericht pro 1868, p. 185; and Graefe und Saemisch, Handbuch, vol. vii., p. 201

[8] Transactions of the Ophthalmological Society, vol. viii., 1888.

[9] Book of Health, p. 254. 1884.

the risk of nicotine poisoning than others, and possibly their comparative immunity arises from the fact that, "according to Vohl and Eulenberg, the tobacco which is smoked in a pipe yields a very much larger proportion of volatile bases, and especially a larger quantity of the very volatile and stupefying pyridine, while in a cigar little pyridine and much collidine is formed, the latter being less volatile and active than pyridine." In support of this theory I may add that I have never seen a case of tobacco amblyopia in a patient who chewed but did not smoke. In my own experience the patients who suffered most were those who had been in the habit of smoking on an empty stomach the first thing in the morning, in fits of sleeplessness during the night, or during the day in place of a meal. Persons are then in the best condition for absorbing the nicotine or combustion products into their blood, and in the worst condition for resisting their injurious influence. Patients complain that in bright light they are easily dazzled, and that a whitish or yellowish mist rises like a cloud in front of their eyes and prevents them from seeing clearly. In the after part of the day, when the sun is not so strong, this sense of dazzling disappears and vision improves, or at least seems to do so.[10] By-and-bye small print can be read only with difficulty, and stronger spectacles are procured but with no good result, while at last even the inability to read ordinary-sized type becomes quite decided. The dimness of vision is as pronounced in the one eye as in the other, and this symmetry, being a strikingly characteristic symptom, is of great value in distinguishing amblyopia due to tobacco or other toxic cause from diseases of the choroid, the retina, or the optic nerve, in which both eyes are also frequently affected, but where the diseased condition of the one is, as a rule, much in advance of that of the other. In the Moorfields Hospital Reports for 1866 Mr. J. Hutchinson, jun., describes a case where one eye was attacked six months before the other; and in the same Reports for 1889 Mr. Doyne gives a case of monocular tobacco amblyopia which he had observed in a man aged thirty-eight years. Such instances are, however, very exceptional. The diminution in the visual acuity varies according to the stage of the disease. At first there is simply a general dimness—a diminution of the light sense—but afterwards vision is reduced to $\frac{1}{10}$ or even $\frac{1}{20}$ of the normal. This failure is due to defect in the centre of the field, but of this the patient is not conscious, as he would be if the disease were due to a lesion in the outer layers of the retina. The scotoma then is "negative" or "relative." That the defect is confined to the central, without any contraction of the peripheral, field of vision is in marked contrast to what occurs in atrophy of the optic nerve—for example, in tabes dorsalis, where there is progressive contraction of the field from without inwards. In the former the defect may involve only a very small area, and in the latter the greater portion of the field, so that only the central parts round the fixation point remain useful. Yet in the following two cases the interference with vision is very different. The first, a man with the central defect, could hardly see sufficiently to guide himself about, while another patient I had—a sufferer from tabes dorsalis—was able, though completely blind in the right eye and with only a small central area of the left remaining, to drive a horse and van through crowded streets. The scotoma is transversely oval and usually extends from the point of fixation to the blind spot, and although remarkably constant in size and shape may occasionally be of larger dimensions and surround the fixation point—the paracentric and the pericentric scotoma of authors. Groenauw[11] and others have tried to form a differential diagnosis according to the shape of the scotoma, and claim by this means to be able to distinguish tobacco cases from other forms of toxic amblyopia. It would seem, however, that those variations in size and shape depend more upon the dose and effect of the toxic agent than upon the particular kind of poison. The more profound the amblyopia the larger the scotoma.[12] A true pathognomonic sign, however, is that even when a white object can still be recognised in the centre of the field there exists a scotoma for colour—green appears grey or white, pink blue, and red brown, &c. As the disease progresses the colours assume a metallic lustre, and red and green look like silver and gold. Gold and silver coins, however, appear alike. At length, with the disappearance of the power in the region of the scotoma to recognise a white object, all colour sensation disappears, and in the most extreme cases even a candle flame cannot be recognised. The scotoma is now absolute. As, however, the eccentric parts of the visual field are quite normal patients are often unaware of their colour blindness; they see a large surface of red or green with perfect distinctness, but when a small square of colour is employed as a test object the defect becomes at once apparent. It is most marked for red and green, least so for yellow and blue, the latter being in many instances recognised perfectly when the former cannot be distinguished. A patient, a gardener, told me that the first indication he had of failing eyesight was inability to distinguish the red colour of a strawberry. Before the fruit was ripe he could distinguish the berries fairly well, but whenever these became red he failed to see them unless he were looking closely at the plants. For the purpose of roughly estimating the extent of the peripheral field and detecting the presence of any central defect I am in the habit of using a series of small white and coloured metal discs, all of which can be fitted into one handle. Of course, where accurate observations have to be recorded a perimeter must also be employed. In the less severe cases, when the central scotoma is not very pronounced and the visual acuity not greatly reduced, I am in the habit of employing coloured papers (3 in. by 2 in.) pasted upon a sheet of black cardboard. The colours selected are as nearly as possible complementary. On red paper are fixed green dots and *vice versâ*. The patient has no difficulty in recognising the mass of colour, but he is quite unconscious of the dots.

In striking contrast to those changes in the visual field just described are the results of ophthalmoscopic examination. In the earlier stages the optic disc may be hyperæmic and less transparent than natural, but in a large majority of instances the ophthalmoscopic appearances are quite normal. As the disease progresses, however, the natural colour of the nasal third of the papilla contrasts with the greyish whiteness of the temporal two-thirds. In extreme cases the whole papilla may assume the appearance of white atrophy; but here, in addition to the central scotoma, there is usually some contraction of the periphery of the visual field. Mr. Lawford[13] has recorded nine examples in which atrophy of the optic nerves with contraction of the visual field came on in patients who at first exhibited all the symptoms of tobacco amblyopia. Complete atrophy of the optic nerves is exceptional and is only met with in those cases in which the central scotoma is large and absolute and in the late periods of the disease. Although nervous complications—e.g., paralysis of the oculo-motor nerves[14] &c.—are of rare occurrence, it sometimes happens that in complete atrophy symptoms of tabes dorsalis become superadded; but it must always remain doubtful how far the tobacco is to be blamed for the onset of such complications. De Wecker[15] has grouped all cases of toxic amblyopia under the heading of retro-bulbar neuritis, but, as Berry[16] suggests, there are good reasons for doubting the existence of actual inflammation of the optic nerve in many instances of tobacco amblyopia. A well-marked case of retro-bulbar neuritis presents points of difference from, and exhibits symptoms which are altogether absent in, an ordinary case of tobacco amblyopia—e.g., pain in movement of the eyes and tenderness when the eyeballs are pressed backwards into their sockets; the central scotoma is not so constant in size and shape; the ophthalmoscopic picture is more often characterised by inflammatory change in the optic disc; the amblyopia is usually more pronounced in one eye than in the other, or the disease may be wholly confined to one eye; and there are often intolerance of light and complaint of aching pain in the circum-orbital region. The presence of the central scotoma is the one common characteristic in all the cases which de Wecker groups together. In position this scotoma corresponds to the area of the retina which is supplied by the papillo-macular fibres.

[10] One of my patients told me he could always play best at bowls in the evening, because when he played in the sunlight he could not see the "jack" on account of the dazzling in front of his eyes; and another patient, a cabman, has assured me that he has less difficulty in distinguishing numbers on doors in the evening than during the day.

[11] Graefe's Archiv für Ophthalmologie, vol. xxxviii., 1892; see also Hirschberg, Deutsche Zeitschrift für Praktische Medicin, 1878.

[12] In the case of the first patient just mentioned the scotoma extended beyond both the fixation point and the blind spot, and for a considerable but indefinite distance beyond the absolute scotoma a red test object appeared to be brown.

[13] Transactions of the Ophthalmological Society, 1890, vol. x., p. 166.

[14] Ian: Recueil d'Ophthalmologie, 1885.

[15] Traité Complet d'Ophthalmologie, vol. iv., p. 421. 1889.

[16] Moorfields Hospital Reports, 1889.

These, according to the researches of Samelsohn,[17] Vossius,[18] and Bunge,[19] lie at first in the axis of the nerve stem as a cylindrical bundle, but change their shape and position as they pass towards the eyeball, into which they enter as a wedge-shaped bundle on the temporal side of the optic disc. The apex of the wedge is directed to the central vessels. In 1882 Samelsohn demonstrated the existence of an interstitial neuritis which was limited to the fibres of the papillo-macular bundle in their course through the nerve stem from the optic foramen downwards towards the optic disc, and this observation has been confirmed by Nettleship,[20] Unthoff,[21] and others. The inflammatory process leads to proliferation of the connective tissue surrounding the nerve fibres, these suffering compression and ultimately becoming atrophied when the new-formed tissue begins to undergo cicatricial contraction—a pathological process analogous to that which is seen in the liver and kidney in consequence of prolonged irritation from alcohol &c. But in typical cases of tobacco amblyopia the complete recovery which usually takes place, and the fact that on the one hand a single good night with quiet sleep can considerably improve visual power, while on the other hand the colour scotoma can be increased by fatigue,[22] is not at all consistent with the theory that the papillo-macular bundle has been actually inflamed. Moreover, the fairly constant shape of the scotoma, its symmetry, and the similarity in the degree of amblyopia in both eyes point rather to the existence of some lesion of a vascular kind than to an interstitial neuritis. From their anatomical position the papillo-macular fibres at the optic foramen, where they enter the nerve stem, are those which are most abundantly supplied with blood on account of the very fine capillary meshwork which surrounds them, and are consequently those that will be most liable to nutritional derangement when any toxic agent exercises an irritating action in their neighbourhood. It is probable, therefore, that in the simpler forms of tobacco amblyopia the directly hurtful action of the nicotine, or of the products of its combustion, produces such a functional derangement of the macular fibres.[23] In severe cases, and more especially in those complicated by alcoholism, anatomical changes in the nerve probably become superadded, and a true retro-bulbar neuritis results. In all such cases, however, in addition to a well-marked and often absolute central scotoma, there is a peripheral contraction of the visual field, and the latter symptom should always be interpreted as indicating the existence of organic disease of the optic nerve, which will sooner or later reveal itself by pallor of the optic disc. Whenever, indeed, in a case of supposed tobacco amblyopia there is found limitation of the peripheral parts of the field of vision, the patient ought to be examined most carefully for any symptoms which would indicate the commencement of disease of the spinal cord—e.g., tabes dorsalis, disseminated sclerosis, &c. As far as my own observations go, all cases of tobacco amblyopia where recovery is not complete will sooner or later exhibit peripheral contraction of the visual field; and if in such cases the alcoholic element be strong, and the patient's environment such as to debilitate and lessen nerve tone, the atrophic changes in the optic disc are prone to become progressive and vision to be correspondingly impaired.

The prognosis is undoubtedly favourable in all uncomplicated cases of tobacco amblyopia provided the patient will give up the use of tobacco. In most instances the promise is readily given, but the intention is not always carried out, and after a short period of abstinence smoking is again begun. The resumption of the old habit may bring on a relapse and prolong the convalescence, and when, as in the first case described, smoking in a modified form is persisted in all through the course of the illness, the recovery of visual acuity is never so complete as it would have been if tobacco had been faithfully abstained from. In every instance the progress is slow, and except in very mild cases, where medium-sized print can still be read, six or nine months or even longer are required before the patient is able to use his eyes for near work. When the central defect is absolute it is always wiser, before giving a definite prognosis, to test carefully to ascertain the existence of any concentric limitation of the visual field, and, when that is present, to give a guarded opinion until sufficient time has elapsed to permit the efficacy of the treatment employed to be tested.

In the treatment itself the first step should always be the prohibition of the use of tobacco and alcohol. Complete abstinence is to be desired in all cases, because it must ever be borne in mind that the result is determined not so much by the actual quantity of tobacco smoked or of alcohol consumed, as by the capability of the patient for resisting their injurious influence. Some patients affirm that they see better when they are using alcohol than when they abstain, but the wish is mostly father to the thought, and the fact remains that true inflammatory changes in the optic nerve are much more likely to supervene upon already existing functional disturbances in those addicted to over-indulgence in alcohol than in those who rigidly abstain from its use. It ought to be remembered, however, that with many tobacco acts as a laxative, and that when its use is suddenly discontinued constipation and digestive disturbances are apt to follow. This difficulty, however, can easily be overcome by the use of some aperient medicine. In the early stages, when, although it may not be visible by the ophthalmoscope, hyperæmia of the optic nerve probably exists, the eyes ought not to be used for near work, and the dazzling of which so much complaint is made can be greatly lessened by the use of dark glasses, while the administration of mercury and iodide of potassium gives good results. After six or eight weeks the mercury may be replaced by full doses of nux vomica. Some recommend the hypodermic injection of strychnine, but no special advantage is to be gained by the subcutaneous method of administration, because the good effects that follow the use of nux vomica and strychnine depend more upon their general tonic effects than upon any special action which they may exercise upon the optic nerve itself. After recovery is fairly complete a quinine and strychnine tonic may be taken with advantage for many weeks, and if the patient be anæmic some ferruginous preparation and cod-liver oil, malt extract, &c. ought to be taken after meals. In addition, everything ought to be done by means of nourishing food in full amount, and of restful holiday with freedom from worry, to promote the patient's comfort and improve his general condition.

Glasgow.

[17] Graefe's Archiv für Ophthalmologie, vol. xxviii., 1882.
[18] Ibid., vol. xxx., 1884.
[19] Ueber Gesichtsfeld und Fasernverlauf im optischen Leitungsapparat. Halle, 1881.
[20] Transactions of the Ophthalmological Society, vol. ii., 1882.
[21] Graefe's Archiv, 1886 and 1887.
[22] Horner speaks of a fatigue scotoma, "Ermüdungsskotom."
[23] In its earlier stages tobacco amblyopia seems to bear a very close analogy to a form of tinnitus which is said to follow over-indulgence in tobacco, and Woakes has advanced the hypothesis that the noises in the head are due to a "hyperæmic state of the circulation of the middle ear."—Deafness, Giddiness, and Noises in the Head; p. 97, 1879.

ON THE EVOLUTION OF THE SYPHILITIC POISON IN MAN AS AT PRESENT OBSERVED IN ENGLAND.

BY HENRY LEE, F.R.C.S. ENG.,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

As a rule the symptoms of secondary syphilis are confined in the first instance to the skin and mucous membranes. If the surface be in good condition and its secretion be not checked it is probable that the disease will eliminate itself through the skin without affecting any other parts. If, however, the secretion from the skin gets checked, according to my experience internal parts may become involved. The bones appear to be the structures most frequently affected, but it is not always clear whether it is the disease or the remedy which is most to blame in these cases. Disease of bone is, as a rule, a late symptom, and it will generally be found that the patients suffering from it have taken quantities of mercurial pills during the time they were exposed to cold air. In a case admitted into King's College Hospital, however, if the history can be relied upon, a node on the frontal bone was the first symptom of constitutional disease. The influence upon internal parts is sometimes developed very suddenly and disappears with appropriate treatment. A patient under the influence of mercury for syphilis rode through a brook whilst hunting. He became paralytic and was completely restored under a regulated course of calomel baths. In rarer instances the early symptoms of bone disease accompanied by nervous affections may be permanent. A wonderfully strong and well-developed man, who from his occupation was necessarily exposed to the weather, was seized while under the influence of mercury with hemiplegia of the left side. A portion of bone was removed from the right

temple by means of a trephine. The patient died from inflammation of the brain. A piece of dead bone an inch in length and confined to the internal table was found within a couple of lines of the opening made by the trephine. The preparation is in the museum of St. George's Hospital. Another patient had necrosis of the whole thickness of the frontal bone extending some two inches in each direction. A portion in the centre was removed by a trephine. This was deeply honeycombed on its internal surface. A thick layer of plastic lymph covered the surface of the dura mater. A drawing of the case is preserved. In two other cases the patients lost a large portion of the outer table of the frontal bone without any corresponding nervous symptoms. In later cases patients who had lost portions of bone from the nose retained their nervous symptoms until death. One of these had epileptic fits; the other, who had been under the care of Ricord in Paris, never lost the sensation of having wool in his mouth. One patient came from India with undoubted secondary syphilis and with necrosis of portions of the upper maxillary bones. With the exception of the two first cases these all came under my observation at a late period, having presumably been under the usual treatment by mercury internally whilst exposed to the weather. These are typical cases, and there can, I think, be no doubt that the diseased action, which naturally would have its evolution on the skin, was transferred to the deeper structures.

In contrast to these it has never occurred to me to see the bones affected where the calomel bath has been carefully used from the commencement. The remedy meets the disease where it is naturally developed, and the excretion from the skin is increased and favours the elimination of the disease. It is through the skin that the natural cure takes place, and it has very seldom indeed happened to me to witness any recurrence of syphilitic symptoms after a persistent and careful use of the calomel bath for two or three months.

What has been said with regard to disease of the bones is equally true with regard to other internal organs. I am acquainted with the cases of six patients who from professional engagements or other causes preferred to be treated by mercury internally while going about exposed to the weather as usual. In all of these very grave internal complication arose, from which none of them ever really recovered. In one case the patient, himself connected with a bath establishment, took the calomel baths for a week or two, and then elected to try other treatment. In the course of a very few months I was grieved to hear of his death. In a second case the patient, who advocated the internal use of mercury, and told his patients that during its use "the more they were in the open air the better," himself died from secondary syphilitic deposit in the liver. In a third case there was hemiplegia, and in a fourth paraplegia. In a fifth case the patient contracted syphilis in attending a midwifery case, and from this he died. Again, in contrast with such cases and a large number which have recently been recorded, I may with truth say that I know of no instance where the calomel bath has been properly used during the early stage of the disease in which any serious internal complication has arisen.

In close connexion with this subject is the question of the lapse of time that ought to intervene between a syphilitic infection and marriage. I have always held that no period can be specified. If the disease has become ingrained in a patient's constitution, and he has become, as often happens, proof against any further mercurial action, no length of time will render him perfectly safe. If, on the other hand, he has gone early through a proper course of mercury, he may, in my opinion, marry at any time. In a number of cases I have given my sanction to a patient marrying under these circumstances, and have as yet had no reason to regret my opinion. In one case a rash appeared after marriage, which was undoubtedly syphilitic; this, however, disappeared with some additional treatment, and no harm happened.

Savile-row, W.

ROYAL INSTITUTION.—A general monthly meeting of the members of the Royal Institution was held on Monday afternoon (the 6th inst.). Sir James Crichton-Browne presiding. The following were elected members:—Mr. Henry Irving, Mr. Henry Perigal, Mrs. Slingsby Tanner, Mr. Ernest H. Fry, Mr. Thomas Muir, Mr. Harold Smith, and Mr. W. S. Smith. The special thanks of the members were returned to Mr. George Matthey for his donation of £50 to the fund for the promotion of experimental research at low temperatures.

INFLUENZA TOXÆMIA OF 1895 (FEBRUARY TO MARCH), WITH SPECIAL REFERENCE TO ITS CARDIAC MANIFESTATIONS AND PULMONARY COMPLICATIONS.

BY ARTHUR W. B. WARDE, M.D. DURH.

THAT "each outbreak differs from another" has become a popular saying, and a true one. It is a saying specially true of the present epidemic, which has been answerable for a large number of peculiar heart and lung affections. It is remarkable that pure lobar pneumonia has been practically absent in my practice, whereas about thirty cases of bronchopneumonia, many of hypostatic type, have come under observation—some mild, some severe. The short duration of a high temperature, the limited number of sudden acute attacks, and the lengthened duration of a slight rise of temperature are very characteristic of this year's influenza. I think no one can doubt the presence of a distinct toxæmia—acute, subacute and abortive, brief or tedious in duration. I believe in all varieties the symptoms are those of septic intoxication. Although not conversant with bacterial life and growth, I venture to state my belief that the train of symptoms comprising influenza and its complications is produced by the absorption of a poison—be it simply chemical or alkaloidal (ptomaines)—into the circulation—a poison manufactured by bacilli multiplying on the mucous membranes of the respiratory and alimentary tracts. It will be apparent to many that I have in mind the present day teaching with reference to the absorption of toxines in diphtheria. The poison in its circulation would seem to act directly on the blood, causing corpuscular destruction; directly or indirectly on the vessels, tending to produce endocarditis, endarteritis, and stasis; and indirectly on the whole nervous system, or selecting one part of this, such as the vagus nucleus and nerve, or that combined with the sympathetic ganglia. The oft-occurring slow pulse, the subnormal temperature (following), the vomiting, and possibly the hypostatic type of pulmonary disease seem to point towards a special preference for the vagus and sympathetic systems.

Difficulty is met with in diagnosing influenza when the attack has aborted, or at least when the acute stage is over—an important question, in that it concerns the signing of certificates for illness. The bright, suffused, and watery eye; the cold, clammy, perspiring hands and sometimes feet; the tremulous condition (occasionally present) of arms, tongue, and body—are all useful as a guide. In a very large number of cases, if uncomplicated, the temperature will be found markedly subnormal. Very frequently an intense redness in the fauces will be found, and thereby hangs a tale, for when, in addition to this redness, the smell of alcohol is strong, it is quite impossible to tell absolutely whether a patient is suffering from the effects of acute alcoholism or from the after-symptoms of influenza. A very slow pulse is to me almost pathognomonic of influenza when it exists, but one cannot be certain, as a rule, of its absence before the attack. This year I found very few marked cases in children. Among very young children two of them appeared to be at death's door—in a word, literally poisoned nearly to death—and yet they proved to be convalescent within twenty-four hours. As in former epidemics, again this year there was an apparently simultaneous outbreak in many parts of the country. The fact is, however, that in December a very severe type of catarrh—in reality, probably influenza in a mild form—was prevalent in this town with cases of true influenza occurring every now and again during that month and the following months of 1895. I believe it to be a fact that this new epidemic was simply deferred in its development by the rigour of our winter. With the thaw medical men and plumbers had ample employment.

I was able to trace the very gradual growth of a town epidemic in Newcastle-on-Tyne during the winter of 1889-90. When our first great outbreak in modern times occurred early in January, 1890, I was able by means of my official visiting list and case-book to trace back, right into the first or second week of November, 1889, a fair number of what I recognised to be cases of true influenza—cases by which at the time I was greatly puzzled. In passing I may add that I firmly believe that influenza was epidemic in North Devon during

the winter 1887–88, and especially during February, 1888. Possibly catarrh may precede influenza, as cholera is said to be fore-heralded by epidemic diarrhœa.

I should be glad to know the opinion of the profession on a few points of interest. Is not influenza really endemic, accounting for the obscure "febriculas" of the past? What is its relationship to ordinary or common catarrh? Are the two of one birth? Are they not one and the same thing? In catarrhal subjects does not influenza take the place of their usual seasonal catarrh? In fact, are the two not mutually interchangeable? Are not common catarrh and influenza, each varying in type and sequelæ, responsible for the symptoms of what is called "rheumatism"? That "rheumatism" may be the result of other causes, such as cold and wet, scarlet fever, septicæmia, pyæmia, and gonorrhœa, I do not deny, but take it that in all some kind of blood poisoning occurs to produce the symptoms called rheumatic. Dr. Newsholme's Milroy Lectures on the Natural History and Affinities of Rheumatism[1] prove its occurrence in epidemic form in certain years and suggest its dependence on some definite disease, which may, in fact, be catarrh or influenza. Although this year has shown me only one joint affection following influenza, I have met with others during former epidemics—*post hoc vel propter hoc*—and the frequency of the cardiac complications to my mind suggests more than a casual connexion between influenza and rheumatism.

Influenza affecting the heart.—Judging from my own experience, the sum total of hearts damaged by this epidemic must be enormous—a truly alarming state of affairs, unless the damaged valves recover so as to show no trace of the mischief. Altogether I came across about twelve cases, all those of women excepting three. In the notes given below I have omitted three cases as being only suspicious, although conclusive enough to myself. Women are specially liable, as also are young adults of both sexes. In some of the cases—possibly in most—a previous catarrh (or influenza) had existed before the occurrence of the actual symptoms for which I was summoned, but was not of such importance as to necessitate lying up. Probably the catarrh was influenza, the actual need for medical advice depending on the complications which followed in the lungs or heart, or in both. In a few possibly the affection was developed at once. In two cases the heart was dilated when first seen, the murmur developing later. The cases are singular for their close resemblance. In all the aortic valves were at fault—in one, possibly, the mitral as well. A slow pulse was sometimes present as soon as the temperature was lower, varying in frequency from 50 to 64, being large, sudden, and bounding, but a full pulse rather than an empty one. A thrill was present on two occasions. The heart was dilated in all cases, the apex beat being felt in the normal interspace in the nipple line or just outside, with cardiac dulness extending often to the mid-sternum and even to the right border of the sternum. The dilatation several times disappeared or lessened at once, but remained in some. A double aortic murmur was present in one case; in the others there was a systolic aortic murmur, usually heard well over the fourth and fifth cartilages near the sternum on the left side, but heard quite as well usually up the chest as far as the aortic area, and even into the right side of the neck, and the left, too, to a less extent. My note is deficient as to the apical murmur, but it was usually absent or at least much subdued. Over the pulmonary area a murmur was usually present, but less marked. Here, again, my notes are defective. In one case only so far has the murmur gone with the lessening dilatation. Time hinders me from discussing the medical aspect of the subject; my knowledge, too, is very limited. My opinion, however, is that the changes are due to endarteritis and endocarditis. Many may suggest that the murmurs are purely hæmic. The prognosis so far is unfavourable for complete recovery, but the future may prove this view to be incorrect.

I will now give extracts from my brief and deficient notes:—

CASE 1.—The patient, a young man aged eighteen years, was ill on Feb. 25th, 1895, and became gradually worse. When seen on March 3rd there was pneumonia in the right lung, the left lung being subsequently affected. No note was made as to the heart. On the 8th a murmur replaced the aortic first sound. His pulse kept at 50 per minute. The temperature was normal or subnormal in ten days from the first rigor.

CASE 2.—The patient, a man aged twenty-eight years, was seen on March 1st, 1895, but not examined because he was dressed. The temperature was subnormal and the skin cold and clammy. About a week later, before allowing him to return to work, I felt his pulse, and it intermitted twice in a minute. The heart was found to be enlarged, and a systolic aortic murmur was present. He had been a vigorous bicyclist, so that the mischief may be old, but I believe it to be of recent origin.

CASE 3.—The patient, a young man aged eighteen years, had been ailing with a cough for three weeks, and had become worse. On March 7th, 1895, there were shivering, vomiting, pains, cough, headache, and vomiting of blood, according to the mother's statement. When seen on the 8th there were pneumonia of the right lung and dulness of the left apex. The heart was enlarged, the sounds being only suspicious. The apex beat was in the nipple line, cardiac dulness extending to the mid-sternum. The pulse-rate was 50. On the 23rd he was recovering from otitis media. The heart dulness was lessening, the apex beat was within the nipple line, an aortic systolic murmur was now present, and the aortic second sound was roughened.

CASE 4.—The patient, a woman aged thirty-four years, had a gradual illness following a cold or influenza three weeks before, aggravated by cold weather and fog. There was increasing weakness, with difficulty in breathing, diarrhœa, and pains over the body just before she was laid up. She had been anæmic before the present attack. She suffered from intense chlorosis, dyspnœa, and a full, throbbing pulse. There was slight dulness of the right apex, front and back. The apex beat of the heart was in the nipple line and accompanied with a well-marked thrill (which was gone in a day or two). The heart was also enlarged to the right. An aortic systolic murmur was present, very loud, and heard all over the chest. The temperature was 100° F., and the pulse 100. For weeks there was a slightly raised temperature. She was rheumatic. The right lung and then the left became congested from the apex downwards. The pulse kept at from 60 to 64. On March 20th, 1895, when last seen, the apex was well within the nipple line; the dilatation, in fact, diminished at once. Murmur was present, but not so loud.

CASE 5.—The patient, a woman aged twenty-two, living two miles away, walked into Folkestone one evening, walked home, and was then taken with something choking her in the throat. She returned to Folkestone with a friend and consulted me early in March of this year. She had symptoms of influenza. I could make out nothing, but suspected angina pectoris. The usual cardiac signs were present. Her temperature was 100° F. She was not seen again.

CASE 6.—The patient, a woman aged twenty-three years, had been ill fourteen days previously with diarrhœa, vomiting, and headache. Her present illness began on March 19th, 1895, with headache, retching, vomiting, and pain in the left side. She was seen on the 20th. The temperature was subnormal. She was very short of breath, and had nervous prostration. The left lung was more or less dull all over the back and the right apex. The heart was dilated (left ventricle), the apex beat being in the nipple line. The action was very tumultuous, and there was a systolic aortic murmur. On the 25th the apex beat was in a normal situation. The murmur had practically gone, the right lung was dull, and the breathing was feeble.

CASE 7.—The patient, a woman aged twenty-seven years, came to me with the heart dilated and an aortic systolic murmur, which is still present (March 26th, 1895).

CASE 8.—The patient, a young woman aged eighteen, came to me complaining of indigestion and pain in the chest since March 24th, 1895. There had been pain in the head a week previously, and also when her sister had influenza at the end of February. She was manifestly anæmic and short of breath. On the 29th the pulse-rate was 76 and the temperature 98·8° F. The impulse of the heart was heaving and forcible. The apex beat was felt mostly just within the nipple line, but also outside. There was a distinct thrill. Dulness extended nearly to the mid-sternum. A systolic murmur at the apex going to the axilla also extended upwards to the aortic area, where it took the place of the first sound. There was a loud *bruit de diable*. There was pulsation in the neck, arterial and probably venous. The lungs exhibited a slightly impaired resonance and respiration in the right apex (back). On April 1st there was dulness in the right apex and down the lung (back).

CASE 9.—The patient, a woman aged thirty-eight years, was ill at Christmas—from influenza, she believed, and as I do now. When seen at Christmas there was great dyspnœa

[1] THE LANCET, March 9th and 16th, 1895.

The heart was enlarged; a double aortic murmur was present and remains. There were general bronchitis and broncho-pneumonia of the hypostatic type. The left lung was more or less solid, and very little air entered. The left apex at the back remained dull. Her condition has not changed much.[2]

Remarks on the nature of the pulmonary complications of this epidemic.—The absence of pleurisy and true pneumonia is remarkable. Whether the heart was affected or not, the signs were much the same. An œdematous or hypostatic congestion seemed to occur in almost all the cases. Bronchial breathing was rarely observed—I suppose because so little air entered the smaller air passages. Taking the number of all those who had lung signs with or without cardiac mischief, mild and severe together, the cases amounted to thirty—i.e., males thirteen, females seventeen. Except in the case of two or three children, and of those who had one or both lungs entirely affected on my first visit, the rule seemed invariable that the mischief should begin at one or other apex (posteriorly), the congestion spreading downwards from above. In many cases, one lung being much affected, a similar process, though of less degree, would start from the other apex. The right apex was the commonest to begin. If the left apex was the first to be affected, almost invariably the right followed suit, whereas, if starting in the right, the trouble generally did not pass to the left. Of the total cases the right lung was affected rather more than the left. Besides the dulness, there was very feeble breathing over the affected lung. Moist sounds generally were absent, except in two or three cases of the acute bronchitic type, which, by the way, were the worst cases, and accounted for the two deaths of the series. If crepitant rales occurred at all, they were very few and appeared late. If taken early and treated heroically, the condition might have passed away within from twenty-four to forty-eight hours, but neglected cases were most tedious and alarming. The cases were generally favourable. There were two deaths—one in a man aged eighty, from hemiplegia, and the other in a woman aged seventy-four, who was dying when first seen. As might be expected, those who suffered severely were the aged, the bronchitic, and the neglected cases, including those who had heart complications. Amongst children I had only three lung cases. The temperature might be subnormal, normal, or only slightly raised while the mischief was spreading. In conclusion, for those who might suggest that drugs were the cause of this condition I may add that as a rule, with few exceptions, the condition had started, or was well advanced, before treatment commenced, and that my drugs were limited, save in a few instances, to liquor ammoniæ acetatis and tincture of squills, both in efficient doses and frequently repeated. The occasional use of salicylate of soda was invaluable. During this epidemic I used very little of the last-mentioned drug, because there was not often any indication for its use, except for "rheumatic" cases; but during the former epidemic I used it largely, with the happiest result, in acute influenza and at the beginning of the true lobar pneumonias which I met with so frequently during its prevalence. With due deference to Dr. Burney Yeo, I must state that I think quinine is not "a specific" for influenza, but that salicylate of soda is such undoubtedly; and that if the drug is used rationally in medium or even small doses, often repeated during the first twelve hours, not only our own but our patients' feelings will be much relieved, and they are often saved from much suffering by the timely suppression of an incipient pneumonia.

Folkestone.

CASE OF DILATATION OF THE COMMON BILE-DUCT SIMULATING DISTENSION OF THE GALL-BLADDER.

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ASSISTANT PHYSICIAN TO THE BRISTOL ROYAL INFIRMARY; LATE PHYSICIAN TO THE BRISTOL CHILDREN'S HOSPITAL.

IN the course of remarks[1] on a case of Cholecystenterostomy Mr. Paul Swain of Plymouth recently referred to an abstract[2] of a paper I read at the Bristol Medico-Chirurgical Society with the above title in February, 1894. Idelayed reading the paper, and subsequently the publication of any detailed account, in the hope of coming across cases which might throw some light on one which, as far as I knew, was unique. The publication of Mr. Paul Swain's paper induces me to offer it for discussion.

The patient, a little girl, was admitted to the Bristol Children's Hospital in November, 1892, having been sent to me by Mr. Hadwen of Highbridge. The mother said that she and her husband had always been healthy and that they had three children aged respectively six years, four years and a half, and two years and a half, the middle one being the patient. There had been one miscarriage subsequent to the birth of the youngest. She could not remember that any one of the children had suffered from jaundice immediately after birth. The patient was quite well until the age of six months, when whilst still breast-fed she had an attack of jaundice which lasted two or three weeks. Since then she had had slight recurrent attacks every six months or so. Otherwise she had been strong and well, grew as fast as the other children did, and began to walk and talk when about fifteen months old. About a year before admission, however, when three years and a half old, the "child's stomach began to grow big," and this enlargement slowly increased, though none the less the girl appeared to be in good health until about four weeks before, when she became thinner in the body and face. On examination it was found that the patient was well-grown for her age and moderately nourished. There was a slight lemon-yellow tint of the conjunctivæ and skin. The head, heart, and lungs were normal. The urine contained a small amount of bile pigments and no albumen. The motions were bile-stained. The liver was enlarged, the upper limit of dulness on percussion over it extending to the upper border of the fourth rib in the nipple line, and its lower edge in the epigastric notch being lower than normal. The surface of the liver in the latter situation felt smooth and firm. Immediately beneath the abdominal wall, in portions of the epigastric, umbilical, right hypochondriac and lumbar regions, an intra-abdominal tumour was found, measuring about three inches in transverse and three and a half inches in longitudinal diameter, with a lower edge one inch below the level of the umbilicus. The tumour was slightly movable laterally, of a rounded shape and smooth surface, with an elastic feel like a tightly distended bladder. Fluctuation was doubtful. The tumour was dull on percussion, and this dulness was continuous with that of the liver above. The spleen was enlarged, with a lower edge two inches below the costal margin. There was no ascites.

The diagnosis was somewhat doubtful. The tumour was considered to be a distended gall-bladder. The presence of jaundice showed that the obstruction must be in the common bile-duct. As to the nature of the obstruction, aneurysm, malignant growth, and gall-stones could be excluded by the age of the patient and the history, and a tuberculous gland pressing on the duct seemed most improbable. It was concluded that the obstruction was probably due to repeated attacks of catarrh of the bile-ducts. The difficulty was that the slight amount of jaundice indicated that the obstruction was not complete, and yet this did not agree very well with the great distension of the gall-bladder.

As it was obvious that no medicinal treatment could do any good I asked Mr. Ewens to see the patient with a view to operation. A cholecystotomy was performed in two stages; 29 oz. of normal bile were evacuated and a drainage-tube was inserted. The cause of the obstruction was not discovered. In a few days the jaundice disappeared, and the child appeared to be getting on fairly well, when a week after the operation she died suddenly from cardiac failure. The cause of this was not known, nor was it explained by the post-mortem examination on the following day. The brain, thoracic organs, stomach, intestines, and kidneys were normal. The spleen was enlarged. The wall of the supposed gall-bladder was firmly adherent to the abdominal wall round the opening made. There was no general peritonitis. On dissecting the bile passages I found that the sac was not, as had been thought, a distended gall-bladder, but the result of dilatation of the common bile-duct. The gall-bladder was very small and contained a little inspissated bile. The cystic duct was obliterated, a fibrous cord only marking its presence. The lower end of the common bile-duct was stenosed; its lumen admitted a hairpin. The middle portion of the common duct was distended into the (now shrunken) sac, which had a thick wall consisting of layers of fibrous tissue. The common duct

[2] Since writing this article I have seen improvement and even disappearance of the heart signs in several of the cases given above.

[1] THE LANCET, March 23rd, 1895.

[2] Bristol Medico-Chirurgical Journal, June, 1894.

above this and the hepatic duct were somewhat dilated, as were also the biliary ducts. The liver was enlarged and in a state of biliary cirrhosis.

The etiology of the condition found is not very clear; it seems probable that, as was at first supposed, there were repeated attacks of catarrh of the ducts, a catarrh which was not confined to the common duct, but which spread to the cystic duct, resulting in the former situation in stenosis and in the latter in total obliteration of its lumen. The enlargement of the spleen was to be expected, for it is a constant feature in biliary cirrhosis and occurs in those cases of alcoholic cirrhosis in which there is jaundice. Possibly, however, this is not a complete solution of the case. Dr. John Thomson of Edinburgh has in a valuable paper[3] collected all the cases and discussed the etiology of the condition known as "congenital obliteration of the bile-ducts," a disease the characteristic features of which are a permanent jaundice which is apparent at birth or appears a few days afterwards, and a liability to hæmorrhages from the skin, umbilicus, and gastro-intestinal tract. The child lives but a short time, though in some cases as long as several months, but sooner or later dies either from convulsions or gradual failure. The condition found after death is an obliteration of one or other portion of the common or hepatic duct. Dr. Thomson comes to the conclusion that there is some congenital affection of the duct, probably a stenosis, and that at a variable period in intra-uterine life a consecutive and consequent catarrh leads to total blocking and obliteration. This suggests that in the case here described there might have been a stenosis, which, though not sufficient to cause a permanent jaundice at birth, yet favoured the development of repeated attacks of catarrh a little later in life. In favour of this may be mentioned that it is unusual to find repeated attacks of catarrhal jaundice in a patient at the early age—six months—at which the first attack came on. Children do not as a rule become liable to catarrhal jaundice until they begin to take solid food. It seems possible, then, that there is a class of cases in which the fundamental defect is a slight stenosis of the bile-ducts. Such cases are characterised by the occurrence of repeated attacks of jaundice in early life. The liver in the course of time passes into a state of biliary cirrhosis. If the stenosis be most marked in the hepatic duct these will be the main phenomena; if it be lower down the common bile-duct may become distended into a retention cyst. It may, perhaps, be suggested that some cases of unexplained cirrhosis of the liver may be in reality due to this cause. The following may be an instance. A girl two years of age was brought as an out-patient to the Bristol Royal Infirmary on Jan. 14th, 1894. Her mother said that she had three other children, all older than the patient, and that she had had no miscarriages. The patient had icterus neonatorum lasting a month. She had jaundice when a year old lasting two weeks, and the present attack had begun two weeks before admission. Her mother said the child had never had any alcohol, and had not suffered from any specific fever or from any other illnesses. On examination it was seen that the skin and conjunctivæ were of a lemon-yellow colour. The liver was enlarged, reaching half an inch below the costal margin, its surface felt rather firm, and its edge was corrugated. It was five weeks before the jaundice disappeared, and at the end of that time the liver was in the same state as when the child was first seen.

If dilatation of the common bile-duct occurs it will not be possible to differentiate it from a distended gall-bladder until operation, when it will be seen that the supposed gall-bladder has no mesentery attaching it to the under surface of the liver. It is somewhat doubtful whether Mr. Paul Swain's case can be placed in this category, for the patient had no jaundice until the age of sixteen years. The case above related certainly shows, however, that a block in the common duct may lead to distension of the duct above into a large sac, and supports his suggestion that the case he operated on may have been such a one. One point further may perhaps be noted—viz., that so little jaundice was produced by a stenosis sufficient to produce so great a distension of the common bile-duct. Possibly a partial explanation may be found in two facts: the bile secreted is largely merely a re-excretion; and blood destruction—the primary source of bile pigments—is much slighter in children than in adults. Similarly in cases of catarrhal jaundice in children, even when the obstruction as shown by the motions is complete, the jaundice is rarely more than slight.

Clifton, Bristol.

[3] Edinburgh Medical Journal, 1891.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A COMPLICATED MIDWIFERY PRESENTATION.

BY R. HILL SHAW, B.A., M.B., B.CH. UNIV. DUBL.

I WAS recently called to a case of midwifery and found on vaginal examination a hand, a foot, the funis, and the vertex presenting. The hand, which I made out to be the right, and which seemed to be larger than normal, was situated to the right of the symphysis pubis. Behind and at the upper part of the right side of the hollow of the sacrum was the foot, though on a higher level than the hand. Entwined around these was the funis, which had no pulsations, and a little further up than the foot, in the left occipito-anterior position, was the vertex, partially engaged in the pelvis. The possibility of twin pregnancy presented itself, but of this, however, I could not find any confirmation. This was the woman's fourth confinement, all her previous ones having taken place without any hitch. Her age was twenty-six years. I could not get any exact history of how long the membranes had been ruptured. The pelvis was roomy. The pains were so strong and frequent that I could not get an opportunity of passing my hand past the presenting vertex. Failing this, and as labour was not progressing, I tried by pushing up the leg and the arm with the funis to engage the head in the brim, but without success. Traction on the foot and version were tried with similar want of success, owing to the whole presentation being tightly jammed into the opening of the pelvis. These attempts occupied about an hour. I then went for my principal, Mr. Anderton, and in a very short time returned with him, when we found that labour had made rapid progress, notwithstanding that the presentation was still as described above. The hand by this time was outside the vulva, and the head was well engaged in the pelvis. The forceps was applied and delivery was completed in a couple of minutes. The child, which was dead, lay in the following position: the right arm was extended at full length above the head, and the right leg was flexed up along the body, reaching over the right shoulder; entangled around these was the funis. The child was of full time and fully developed, and the mother stated that she had felt it move a couple of hours previously to sending for me. The largeness of the hand was due to œdema, the result, no doubt, of pressure, which also acting on the cord produced asphyxia.

New Mills, Derbyshire.

A CASE OF EXTRA-UTERINE FŒTATION OF THREE YEARS' STANDING.

BY ANNA LYDIA CHURCH, M.B. R.U. IREL.

A HINDU woman aged twenty-five years, married, was admitted into the Free Church of Scotland Mission Hospital, Madras, on Nov. 1st, 1894, in an evidently wretched state of health. On examination the abdominal wall, a little below and to the right of the umbilicus, was found to be destroyed by ulceration, leaving a space of four or five inches long and about three broad, through which protruded an evil-looking, exceedingly offensive tumour. A strap of integument crossed the centre of the space and covered a small portion of the tumour. At first sight the mass suggested an intra-abdominal malignant growth that was undergoing necrosis and had ulcerated through the abdominal wall. Closer inspection, however, revealed a white, hard plate with serrated edges projecting from the surface. This proved to be bone, and when the end of a tiny long bone was afterwards found the diagnosis of extra-uterine fœtation was clear. The first bone belonged to the cranium. The history elicited from the patient and her friends was somewhat meagre and was as follows. Three years previously she consulted a medical man and was told that she was pregnant. Two years elapsed, but no child was born. Amenorrhœa prevailed during this period. A lump was noticed in the abdomen and eleven months before admission the skin over it began to give way and pus escaped, but it was not till

about eleven days before admission that fetor was noticed. The patient's condition on entering the hospital was deplorable. She was so feeble that she had to be carried upstairs to the ward; her pulse was small and rapid, and her temperature 101° F. An attempt was made to cleanse the mass and diminish the fetor by repeated antiseptic washings and dressings until arrangements could be made for operation, during which treatment numerous live maggots made their appearance from the crevices of the tumour and were removed. A day or two after admission the patient was put under chloroform and the fœtal remains removed. I had arranged to cut the strap of integument with Paquelin's thermo cautery so as to avoid producing bleeding surfaces, which might favour septic absorption; but on removing the dressing it was found that the strap had given way and that no cutting was necessary to enlarge the opening, and the only instrument used during the operation was a pair of dissecting forceps. First there came away a shapeless mass containing the ribs and some other bones of the fœtus, and then the remainder of the bones were removed piecemeal, some of which were lying loose and others partially embedded in the walls of the sac. The extraction of these last caused slight bleeding at one or two points. From a tunnel in the wall of the sac several live maggots emerged. The fetor was sickening. The bones appeared to belong to a fœtus of about four months old. The sac was thoroughly flushed with boiled water and was then filled to the brim with sublimate solution (1 in 1000), which was allowed to remain for several minutes and then poured off. It was lined with a layer of foul necrotic tissue, but I refrained from scraping it, fearing that the production of a large raw surface might be the cause of fatal sepsis, and judging that with careful use of antiseptics the necrotic tissue would come away harmlessly on the dressings. The sac was accordingly filled with iodoform gauze soaked in iodoform and glycerine, and carbolised tow placed over it.

The result of the operation was most gratifying. The temperature fell to normal at once, and the horrible fetor which had rendered the patient's life miserable disappeared. The pulse-rate fell gradually. The sac was washed out and dressed twice daily, ichthyol and glycerine being substituted for the iodoform emulsion, as the stock of iodoform happened to run short at the time. The walls were merely painted with the ichthyol. The sac rapidly cleaned and contracted, and began to fill up from the bottom. Small fragments of bone were found on several occasions on "sounding" the walls with the point of the forceps and were removed. The patient was given a fair amount of brandy at first and abundant nourishment, and was able to be up about a fortnight after the operation. She was discharged on Dec. 1st and attended as an out-patient till the wound completely closed. One small granulating surface refused to heal for some time, and on probing it bone was felt. A fine-pointed pair of forceps was introduced and five small fragments of bone extracted. On a subsequent occasion two more fragments were removed. The wound then promptly closed. Bimanual examination made lately shows the uterus to be high up near the abdominal wall, somewhat retroverted and fairly movable, although numerous adhesions can be felt. There is much ill-defined thickening to the right of the uterus. The patient has had two normal periods since leaving hospital.

Madras.

PRESENTATIONS.—Dr. Francis R. Russell of Guildford has been presented by the Surrey County and Guildford Borough Police Force, in connexion with the St. John Ambulance class, with a riding watch bearing the following inscription:—"Presented to Dr. F. R. Russell by the Surrey County and Guildford Borough Police Force as a slight recognition of his valuable and honorary tuition throughout a course of lectures of first aid to the injured to the St. John Ambulance Association. April, 1895."—Dr. A. W. Anderson, Dalbeattie, Kirkcudbrightshire, was presented with a valuable travelling bag and dressing case on the completion of his course of ambulance lectures by the members of his class in connexion with the St. Andrews Ambulance Association.—Mr. G. N. Coombes, late assistant to Dr. L. Williams, on his leaving Wrexham to take up an appointment in India as surgeon to his Highness the Rajah of Cochin, was presented by his friends with a handsome smoker's cabinet, which bore a suitable inscription upon it, and he was also entertained to dinner by his colleagues of the medical profession.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

NOTES OF THREE CASES OF HERNIA OF AN EXCEPTIONAL NATURE.

(Under the care of Mr. W. G. SPENCER.)

THESE cases, although the treatment was unsuccessful in saving life, are of interest from a clinical standpoint and are fully commented on by Mr. de Santi in his remarks. Opinions must always differ as to the treatment of gangrenous intestine when it is met with while operating for hernia; the condition of the patient is usually bad from every point of view, and as we may take it for granted that those which have been submitted to resection are the most favourable cases it is hardly possible to compare on equal terms statistics of the two methods. Each surgeon must judge for himself and not trust to strict rules to guide him. For the account of these cases we are indebted to Mr. Philip R. W. de Santi, surgical registrar, from notes by Messrs. Penny, Ambrose, and A. J. Smith.

CASE 1. *Strangulated femoral hernia (Littré's), the sac containing a gangrenous diverticulum; spread of gangrene to gut internal to stricture; peritonitis; resection of gangrenous gut.*—A woman aged seventy-seven years was admitted on Dec. 4th, 1894, with a strangulated femoral hernia. The patient had had a reducible right femoral hernia for eleven years; she had never worn a truss and had never suffered any inconvenience from the rupture. On Dec. 2nd between 1 and 2 P.M. the hernia came down suddenly (no exertion), and was of a larger size than on previous occasions. She had acute local pain, which soon extended to the whole of the abdomen. Retching, but no vomiting, commenced a few hours later; she passed flatus by the mouth, but not by the rectum. The bowels had been open each day before, but had now become constipated. On admission an ovoid swelling hard in parts, soft in others, and emphysematous was found in the right femoral region external to the spine of the pubes. The skin over it was red and inflamed but movable. There was no impulse on coughing. There had been constant nausea but no vomiting, and absolute constipation since Dec. 2nd. The patient was very collapsed and was suffering from bronchitis and emphysema. The pulse was 120 and the temperature normal. Mr. Spencer decided to operate at once. Nitrous oxide gas and then ether were administered and the ordinary incision made over the tumour. A mass of gangrenous subperitoneal tissue was exposed and removed. The hernial sac was then seen and opened, and found to contain a piece of gut of the size of a walnut, very tense, ashy black, and covered with beads of gas. As much as possible of the sac was cut away and the exposed gut incised. A quantity of sanious fluid escaped, and the bowel was then snipped off flush with the femoral canal; in the centre of the remaining part a depression was felt, but no force was used to pass the finger into the femoral canal. The wound was then swabbed out with glacial carbolic acid, a drainage-tube inserted, and the wound closed with deep silk sutures. The patient stood the operation well. She slept well till about 4 A.M. on Dec. 5th, when she began to vomit coffee-coloured fæcal matter, about one pint in quantity; she also complained of severe abdominal pain. The pulse was 96, regular. The temperature was normal. At 8 A.M. the vomiting ceased. An enema was given on the night of Dec. 5th, but with no result. Vomiting started again at 2.35 A.M. on Dec. 6th and lasted till 9 A.M. The patient was weaker, but did not complain of pain. She had zyminised suppositories, one every three hours. As the vomited material was fæcal a second operation was decided on by Mr. Spencer, who was assisted by Mr. de Santi. The original incision was continued upwards for about two inches through the abdominal walls and Poupart's ligament divided. No gut was found in the femoral canal, but a piece of small intestine

gangrenous for about two inches of its length was found just above Poupart's ligament and was connected with a diverticulum the stump of which was in the femoral canal. The gangrene had thus extended for two inches on either side of the diverticulum well inside of any constriction. The gangrenous gut was torn a little as it was lifted and there was extravasation of fæcal material which was caught on a sponge. The gangrenous piece of intestine was excised and the two healthy ends united by a Murphy's button and the wound irrigated with a 1 in 40 carbolic lotion and closed. The patient gradually sank and died at midnight on Dec. 6th.

Necropsy.—The soft tissues about the wound were in a condition of diffuse suppuration. On opening the abdominal cavity the peritoneum was found to be of a dark-red hue and covered with yellow lymph, which was thickest and most abundant in the right iliac region and in the pelvis. In these regions several coils of intestine were matted together and to the internal aspect of the wound. Among them was found the resection wound, and inside this portion of gut (eight feet from the end of the duodenum) a Murphy's button. Immediately around the resection wound the gut was of a darker colour than elsewhere. After cutting out this portion water was found to percolate slowly between the stitches on the free aspect of the gut. The rest of the gastro-intestinal tract and the other organs were normal.

CASE 2. *Intestinal obstruction; kinking (?) of gut in region of cæcum from a subperitoneal lipoma; subsequent gangrene of the greater part of the small intestine in a pregnant woman the subject of tertiary syphilis and nephritis.*—The patient, aged thirty-eight years, was admitted into the Queen Anne Ward on Feb. 6th, 1895, with symptoms of strangulated femoral hernia. The patient had had a right reducible femoral hernia for twelve years and had worn a truss for the last eight years. Four months ago, having taken off her truss prior to going to bed, the hernia suddenly came down; at the time she was lifting one of her children into a chair. A medical man tried taxis, but unsuccessfully. There was acute pain in the right groin and abdomen, but no vomiting. During the early morning the hernia went back of itself. On Feb. 4th, 1895, at 3 P.M. the patient was stooping down in the act of dressing her child when the hernia again descended suddenly though she was wearing her truss at the time. A medical man tried taxis, but ineffectually; vomiting soon set in, the matter vomited being a greenish, very offensive liquid. The sickness continued during the night of Feb. 4th and also constantly on Feb. 5th and 6th. The bowels were open freely on Feb. 5th. On admission the patient was collapsed, with a temperature of 96·4° F. The house surgeon distinctly felt the hernia, but did not attempt taxis, as it had been repeatedly tried outside. He gave the woman twenty minims of tincture of opium and ordered a hot bath, and sent for the surgeon of the week. The patient shortly after admission vomited three times; the vomited matter was green and very offensive. When seen by Mr. Macnamara no hernia was discoverable. The bowels acted three times, the motions being loose. On Feb 7th the temperature was 96·4°. The pulse was small and feeble. The tongue was dry and brown. She slept badly, vomiting about every hour. The bowels were open six times. At 9 P.M. the patient was examined by Mr. Spencer, who found a movable, soft swelling in Scarpa's triangle about one inch in diameter and rather external to the saphenous opening. Under ether the right femoral canal was explored; no hernia or hernial sac was discoverable. The soft swelling proved to be a mass of subperitoneal fat the pedicle of which was followed into the right inguinal canal and found to be closely connected with the round ligament. It was separated, ligatured, and cut off within the abdominal ring. The femoral and obturator rings were then examined from within the abdominal wall, but outside the peritoneum; they were quite free. On Feb. 8th there was marked general improvement. The patient had not vomited since the operation and was being fed on nutrient enemata. On Feb. 9th improvement was still maintained. She was fed by the mouth with milk, beef-tea, and brandy. The bowels were freely open after enema (Feb. 8th). On Feb. 11th she complained of abdominal pain; the abdomen was not distended. The bowels had not been open since Feb. 8th. The temperature was subnormal. On Feb. 12th she vomited for the first time since the operation. The vomited material consisted of beef-tea and milk. She had great abdominal pain, but no signs of peritonitis. The bowels were open on Feb. 11th and 12th after an enema. The wound healed by first intention. On Feb. 13th the patient had a restless night and died at 11 A.M. from asthenia.

Necropsy (twenty-eight hours after death).—The body was much emaciated. In the peritoneal sac were five or six ounces of dark reddish-brown clear fluid; the peritoneum everywhere was smooth and shiny; the mesentery was not thickened; the intestines were not distended; the small intestine, with the exception of the first and last two feet, was of a dark-purple colour, was somewhat swollen, and as far as the central moiety was concerned was in a condition of gangrene. There was, however, no obvious swelling of the veins and arteries, certainly none in the mesenteric vessels. The surface of the gut had a slightly worm-eaten appearance, but there was no definite ulceration. The small intestine contained a thickish bloody fluid. There were no constriction marks. The lymphatic glands were not enlarged. The large intestine, except the caput coli, which was hyperæmic, contained semi-fluid yellow fæces and was quite normal. The stomach, liver, spleen, and pancreas were normal; as to the kidneys the capsule was thick and adherent, the surface granular, the cortex diminished and of flabby consistence, and the colour drab. The bladder was contracted. The heart weighed 8 oz.; there was slight hypertrophy in the left ventricle. The valves were competent, the mitral flaps being thick. The foramen ovale was patent, but valved. The arteries and lungs were normal. The uterus was 4½ in. long and 3 in. across the fundus. It contained a fœtus of about two and a half months. There was a corpus luteum in the left ovary.

CASE 3. *Strangulated inguinal hernia; reduction "en masse"; abdominal section; intestinal paralysis; death.*—A man aged fifty-one years was admitted on March 5th, 1895, suffering from symptoms of strangulated hernia. The patient had had a right reducible inguinal hernia for thirty years. His medical man, Mr. Munyard, has kindly supplied the following notes. The patient had a fall seven weeks previously, and was left on the pavement for some little time. He apparently got a chill, and had a cough with raised temperature for a week, and influenza was diagnosed. On Sunday, March 3rd, the patient was very sick, and the effort of vomiting, according to the patient's statement, brought the hernia down. The man tried to reduce it, but failed, though he had always succeeded before: later in the evening he, however, apparently returned it. On March 4th Mr. Munyard was visiting a patient who lived in the same house as the one in question, and his attention was called for the first time to the rupture. The man was then suffering from stercoraceous vomiting, and there was a distinct inguinal hernia of the size of two walnuts. Mr. Munyard easily reduced it, but noticed that the hernia did not go back with a slip or gurgle, but as a whole. On March 5th on again visiting the patient he found that severe vomiting had continued all night, that the vomited matter was fæcal, and that the patient was very collapsed. The inguinal canal was quite free, but did not feel preternaturally open. The bowels had not acted since March 2nd. He was sent at once to the Westminster Hospital and admitted. A diagnosis of reduction *en masse* was made and median laparotomy was performed by Mr. Spencer. On opening the peritoneal cavity a well-marked reduction *en masse* was seen, the hernial sac and its contents having been pushed back into the abdomen and the peritoneum doubled up before it. The gut was tightly nipped at the neck of the sac; about six inches of the gut were considerably congested and of a dark colour, and at the actual site of constriction the gut was ulcerated for about three-quarters of an inch of its circumference. The neck of the sac was divided and left *in situ*. The ulcerated part of the gut was closed with Lembert's sutures and then left in a furrow so that adhesions might form around it. The pillars of the canal were then sutured together from the outside and the abdominal wound closed in the usual way. The patient progressed very favourably up to March 9th, the vomiting having ceased and the bowels acting of their own accord daily. On the 9th, however, the abdomen became distended and there was much pain. On the 10th the patient died, the abdomen having gradually become more distended and the patient weaker. A post-mortem examination was refused.

Remarks by MR. DE SANTI.—Case 1.: The prognosis in this case was particularly unfavourable; the patient's advanced age—namely, seventy-seven—the duration of the symptoms of strangulation (over forty-eight hours), and the gangrenous condition of the contents of the sac together presented such a formidable condition of affairs that recovery could hardly be expected; added to which, owing to the continuance of the symptoms of strangulation after the herniotomy, it was deemed advisable to undertake a second operation, whereby a piece of gut, gangrenous for about two

inches of its length, and lying just above Poupart's ligament, was discovered. The question then arose as to whether, in the patient's collapsed and desperate condition, it would be judicious to perform immediate resection and suture of the gut or establish an artificial anus. As it was recognised that the gut that was gangrenous was high up, probably the upper part of the jejunum, Mr. Spencer considered that the establishment of an artificial anus was out of the question. Resection of the gut and union of the healthy ends by means of a Murphy's button were therefore decided on and performed, as holding out the only chance of recovery and as being the most rapid method practicable. It is not my intention in these short remarks to go fully into the treatment of gangrene of the intestine due to strangulation in hernia, a subject upon which there is a considerable diversity of opinion. It will suffice for me to say that gangrenous hernia may be treated on one of two principles: either (1) by resection of the affected portion and immediate suture, or (2) by the formation of an artificial anus. According to Macready,[1] the rule of treatment among surgeons in London at the present day is to form an artificial anus, and he states that of twenty-one London surgeons who have expressed their views upon this subject in public of late years seventeen are in favour of forming an artificial anus and four of doing primary suture. I personally, though my experience is necessarily small, am in favour of establishing an artificial anus in the great majority of cases, for it seems to me that primary suture has to be carried out under the most unfavourable circumstances, the tissues being in a most septic state, the exact limits of the gangrene uncertain, and the risks of subsequent extravasation, sloughing, or giving way of some of the sutures great. The operation also is a difficult one to perform, and though its difficulty is no objection it takes from one to four hours (M'Cosh) to carry out, and as the patient is usually in a state of considerable collapse his condition is hardly such as to stand the additional shock caused by so long and severe an operation as resection and suture. Of those, however, who advocate resection and primary suture I may mention Mikulicz, Lockwood, and Kendal Franks. Mikulicz collected recently (1891) 173 cases of gangrenous hernia, of which 94 had been treated by the formation of an artificial anus and 67 by primary suture; the mortality in the former was 76 per cent. and among the latter 47 per cent. Lockwood collected 35 cases from the clinical records of St. Bartholomew's Hospital, all of which had been treated by the formation of an artificial anus, with a death-rate of 88·5 per cent. He compared these with the mortality of cases treated by primary suture from tables of Makins and M'Cosh, and obtained a difference so greatly in favour of primary suture that he strongly advocates its general employment in gangrenous hernia. Again, Kendal Franks of Dublin[2] collected from various sources 202 cases of gangrenous hernia treated by the formation of an artificial anus and giving a mortality of 80·7 per cent., and 222 cases treated by primary suture and giving a mortality of 47 per cent. He is strongly against the establishment of an artificial anus as the routine practice. Notwithstanding, however, these favourable statistics I would be inclined to perform resection and immediate suture under the following conditions only: (1) in young patients, and where the state of the patient is such that he will be able to stand the prolonged anæsthesia required by the operation—in other words, where there is no profound collapse; (2) in the absence of a generalised peritonitis; (3) in the absence of great distension of the afferent piece of intestine, which is often filled with quantities of fæces and gases; (4) when it is possible to draw out the whole of the gangrenous portions of the intestine and mesentery, and resect in healthy tissue; (5) when there is no great difference between the calibre of the two ends, and they can therefore be thoroughly and efficaciously united; and (6) in the presence of good assistants and the necessary surgical appliances for anastomosis or suture. The presence of a distinct diverticulum about an inch and a half in length in the hernial sac is a point of some interest in this case; whether it was a true congenital diverticulum of the intestine, consisting of all the coats of the gut, or a false variety (pouched partial enterocele) formed by the protrusion of the mucous membrane between the fibres of the muscular coat and projecting from the bowel, is a point of some doubt owing to the condition of gangrene in which the tissues and diverticulum were found. In Mr. Spencer's opinion the diverticulum was of congenital origin.

[1] Treatise on Ruptures, p. 397.

[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxv., p. 215.

Case 2 presents many features of great interest. For twelve years the patient had apparently had a swelling in the region of the right femoral canal and had worn a femoral truss to keep it up; four months before admission, the truss being temporarily off, the swelling appeared, causing great pain but no vomiting, and went back, according to the women's statement, of itself. Two days before her admission to Westminster Hospital a similar condition of affairs occurred, and the patient on admission had a swelling in the femoral region which was distinctly felt by the house surgeon, but which had apparently disappeared when Mr. Macnamara examined the patient a little later. Between Feb. 4th and Feb. 7th the patient suffered from pretty constant vomiting, but her bowels acted freely and there was no pain in or swelling of the abdomen. On Feb. 7th Mr. Spencer on examining the woman found a soft, movable mass in the neighbourhood of the femoral canal, and as vomiting persisted he explored the femoral canal but found no trace of sac or hernia, but a subperitoneal lipoma running up into the right inguinal canal; this was ligatured and removed, and the operation considerably benefited the patient, the vomiting having ceased. For a few days she seemed to be going to recover, when gradually a change for the worse was noticed and the patient died from asthenia on Feb. 13th, nine days after the first symptoms. The necropsy revealed a very curious condition of the intestine—namely, intense congestion of the whole of the small intestine, the central moiety being in a state of actual gangrene; there were no constriction marks discoverable and the mesentery and mesenteric vessels were quite healthy. The peritoneum also was quite normal. I am at a loss to account for the condition of the small intestines. The symptoms of strangulation were due possibly: (1) to the subperitoneal lipoma drawing on the peritoneum and kinking the intestines in the region of the ileocæcal valve; and (2) incomplete reduction, completed whilst the patient was going under an anæsthetic, death taking place from failure of peristalsis in a pregnant woman who had suffered from syphilis and chronic nephritis.

Case 3.—In this patient, who had had a right inguinal hernia for some thirty years, which he had been in the habit of reducing with ease himself, symptoms of strangulation suddenly came on, followed apparently by the appearance of the hernia (patient's statement only). At first the man was unable to reduce the hernia, but later appears to have done so. The following day he was seen by his medical attendant, who found a distinct inguinal hernia which he was able to easily reduce, but he particularly noticed that it went back without any gurgle or slip, and that the inguinal canal was particularly free. He diagnosed reduction *en masse*, and from the wrinkled condition of the peritoneum found at the operation, permitting of the easy withdrawal of the peritoneum from the laparotomy wound, it is probable that for some long time past the man had been in the habit of reducing his hernia *en masse*, and that when it became strangulated he returned it *en masse* and in a condition of strangulation. The right inguinal canal and other hernial sites being quite free, there being no tumour or impulse to be felt in the right inguinal canal on coughing and no fulness on palpation over Poupart's ligament, and bearing in mind the fact that in reduction *en masse* the neck of the sac may leave the internal abdominal ring and rise in the abdominal cavity for from one to four inches, Mr. Spencer decided to perform median laparotomy in preference to exploration of the inguinal canal by the usual incision.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Microscopic Structure of Oxalate of Lime Calculi.—Results following the Experimental Removal of Portions of the Kidney.—Elongation of Radius from Osteitis Deformans.

AN ordinary meeting of this society was held on May 7th, Dr. PAVY, the President, being in the chair.

Dr. ORD and Mr. SHATTOCK made a communication on the Microscopic Structure of Calculi of Oxalate of Lime. They began this communication by noticing first the chief microscopic forms of such calculi, the smooth, tuberculated, spiny, and crystalline. The chief forms in which oxalate of lime was met with in the urine were then referred to: octahedron, flattened octahedron, "*macle*," in which the bases of the two

pyramids of an octahedron were rotated so that the angles of one projected across the sides of the base of the other, the spherular form, including dumb bells, and the tabular form. The key to the interpretation of these varieties was supplied by the experiments of Mr. George Rainey, made more than thirty years ago, which showed that crystalline substance if deposited in colloidal or viscous media underwent modifications in form which in the most pronounced degree took the figure of perfect spheres. Dr. Ord subsequently studied the question in oxalate of lime &c., causing the salts to deposit in the substance of gelatine by allowing double decomposition to occur in solutions on either side of a diaphragm of the colloid; the solutions met in the jelly, and on cutting sections of this all forms were traceable, from typical crystals to perfect spheres. Some such spheres were compound in structure. The colloid that exercised most influence was albumen. Sugar appeared to have no influence on oxalate of lime, though it had on uric acid. They next proceeded by means of a lantern demonstration to exhibit the microscopic structure of the different forms of calculi. The specimens were prepared by grinding the calculus half through, cementing by means of melted Canada balsam to a slide, and then grinding it from the opposite aspect; this transparent section was then covered, after placing balsam solution on it to render it transparent. The summary as to the construction of the nucleus of such calculi was as follows:—It might be (1) large transparent crystals of oxalate of lime; (2) similar crystals rendered more or less opaque by secondary cleavage; (3) minute crystals not of octahedral form; (4) rosettes of striated conoidal or fan-shaped elements, like those which form by their regular juxtaposition the body of the calculus; (5) spherules in process of coalescence. Such forms might occur in various combinations. In rare cases large octahedra were met with in the urine as "gravel," and by a chance aggregation of such the nucleus usually arose. Very soon, however, the deposit took a different form and constructed the "body" of the stone; this change might be explained by the presence of such a nucleus leading to the admixture of colloid with the urine by reason of the inflammation in the urinary passages which it excited, and this would be mucus or exudation from the vessels of the inflamed mucosa. The secondary cleavage of the large elements of the crystalline nucleus probably indicated the action of colloid in a slight degree. In regard to No. 3, the small crystals were really tablets, and could be produced in gelatine, as could also rosetttes of such. The presence of proper spherules was rare. Next, as to the body of the calculus. In all cases the body arose in cones of crystalline substances, sharply pointed at their inner ends and diverging from the outer surface of the nucleus. In transverse section these cones had a very irregular outline, deeply sinuous or jagged, so as to be sutured to one another; they were doubly striated—i.e., in the longitudinal and transverse directions, or radially and concentrically as to the centre of the entire calculus. Both forms of striation might be represented in the spheres artificially produced, but Dr. Ord and Mr. Shattock could offer no real explanation of them. Often there occurred in the body of the calculus zones of a different kind. These were formed by a non-crystalline molecular basis in which lay, concentrically arranged, lines of distinct granules; the latter they held to be urate, the former oxalate, of lime; there was, in fact, no sharp line of distinction between this form of oxalate and the striated. One of the most interesting of the results was the likeness that subsisted between the calculi, as a whole, and the microscopic spheres and crystalline aggregations which might be artificially produced; there were parallel forms in both. In regard to the colouration of oxalate calculi, certain of the sections displayed brilliant crystals of hæmatoidin. That the diffuse colouration was due to urinary pigment they thought disproved by the similar colouration of intestinal calculi of oxalate of lime in herbivora. They thought it most probably due to hæmoglobin. Some of the calculi gave abundant evidence of iron on analysis, probably indicating blood, though as normal urine contained small quantities of iron in as yet an unknown state of combination this did not exhaust the question. Ebstein had figured a small portion of the body of a calculus of oxalate of lime, but beyond that the minute structure by means of sections had not been investigated. Vandyke Carter's method had been simply to pick out minute pieces from different parts of calculi to examine them.—The PRESIDENT remarked that some persons would for year pass urinary sand and have no trouble from calculus, while in others who suffered from urinary calculus there was an absence of history of gravel. In many patients again there was a history of one-sided pain, and it appeared in them that one kidney only was at fault. Hence, in these patients there seemed to be a general tendency to the deposition of solid matters from the urine, and a local tendency leading to deposit from one kidney only.

Dr. J. R. BRADFORD then gave an account of the results following the Experimental Removal of Portions of the Kidney. The object of these experiments was to investigate the changes in the urine and in the general nutrition that occurred when an animal had but a fraction of one kidney available for the discharge of the renal functions. The experiments were carried out on dogs, the ingesta and excreta being determined before and after the operation. The nitrogen was determined by Kjeldtal's method. A wedge-shaped portion was excised from the middle zone of one kidney and the cut surfaces approximated by sutures. After an interval of some weeks the entire opposite kidney was excised. The results may be summarised as follows. Removal of a portion of one kidney is followed by a variable amount of general atrophy of that kidney and by hypertrophy of the opposite kidney provided the operation be performed in adult animals. Removal of a portion of one kidney only is followed by a slight increase in the amount of urine excreted, this increase is sometimes only temporary, and there are no other ill effects. If after having excised a portion of one kidney the entire kidney of the opposite side be removed, the following results are seen. If only some two-thirds of the total kidney weight has been removed altogether at the two operations, the animal remains in fair health and does not emaciate. The quantity of urine excreted, however, is greatly increased—i.e., doubled or trebled in amount. There is no increased excretion of urea. On the other hand, if as much as three-quarters of the total kidney weight has been removed then there is a still greater increase in the amount of urine excreted and in addition there is a considerable increase in the daily urea excretion, the animal emaciates rapidly and dies within a few weeks of the second operation. Excision of a wedge from each kidney is followed by the excretion of a large amount of urine, but there is no increased excretion of urea and the animal remains in good health. Hence when the renal tissue is reduced to but one-fourth of its original weight there is not only no diminution in the amount of urine and urea excreted, but, on the contrary, a great increase, the increase in them being dependent upon rapid emaciation, which is not checked by a liberal diet.—Dr. HERRINGHAM said that the experiments which had been related had a bearing on hydruria in renal disease. He asked if increased blood pressure or cardiac hypertrophy had been produced. The other phenomena which had been described were so different from what was seen in chronic nephritis that they could hardly be connected with that affection.—Mr. STANLEY BOYD asked how the hæmorrhage from the kidney had been checked when the wedge-shaped pieces were removed.—Dr. SHERRINGTON asked what was the alteration in ratio of the nitrogenous extractives to the urea, and if there was found any body other than urea disproportionately increased either in the tissues or in the urine itself. He asked if the total nitrogen in the tissues had been estimated.—Dr. WASHBOURNE asked if the toxic property of the blood of the animals operated on had been tested.—Dr. BRADFORD, in reply, said that he had detected no cardiac hypertrophy. The blood pressure remained high and abnormally so; but it was very difficult to estimate in a dog under chloroform. In dogs in whom three-fourths of the renal substance had been removed, and who were too weak to stand, the blood was found to contain twenty to thirty times the normal amount of urea, while the blood pressure remained normal. In those dogs in whom double nephrectomy had been performed the blood also contained thirty times the normal amount of urea, but in these there was practically no blood pressure. Patients with extremely granular kidneys might pass a very large quantity of urea. In removing the wedges from the kidney blood was found to come from three sources—viz., vessels in the loose connective tissue of the hilum, general oozing from the cut surface, and bleeding (principally venous) at the junction of the medulla with the cortex. He ligatured the vessels in the hilum and, if necessary, passed a suture under those at the junction of the cortex with the medulla, and controlled the oozing by pressure with cotton wool. He did not close the wound until bleeding ceased. Both the

urea and the nitrogen had been estimated in the food, urine, and fæces. In the urine no nitrogenous body, except urea, had been found, and the same was true of the blood; but in the muscles, liver, and brain, especially the former, a large amount of nitrogenous substance was found which was not urea. He had not yet determined the toxic properties of the blood.

Mr. SHATTOCK showed for Mr. Clutton the bones of an arm from a case of Osteitis Deformans. The radius was markedly elongated, being twisted into an S-shaped curve because the ulna was unaffected. The specimen was very interesting because it showed that interstitial production of tissue in a bone itself as a result of inflammation could actually lengthen the bone after the epiphyses had united and the bone had ceased to grow.

OBSTETRICAL SOCIETY OF LONDON.

The Common Form of "White Leg" occurring after Childbirth.—Exhibition of Specimen.

A MEETING of this society was held on May 1st, Dr. F. H. CHAMPNEYS, President, being in the chair.

Dr. C. HUBERT ROBERTS read a paper giving details of sixteen cases of so-called "White Leg," most commonly met with after childbirth. Having rapidly reviewed the literature of the subject up to the present date, he pointed out the difference of his cases from those described in most text-books of the present day, and argued briefly that white leg described in such books is not the common variety met with after delivery. He described concisely the form he believes to be the common one, mentioning its symptoms, duration, complications, and treatment. He said that the term "white leg" includes several morbid conditions which differ in many particulars, and proposed the following classification of the disease: (1) cases which are due to pressure; (2) cases associated with general disease; (3) cases of a true septic nature; (4) cases of thrombosis apart from sepsis; and (5) cases of thrombosis and sepsis combined. He came to the following conclusions: (*a*) the form which he calls thrombotic is the common variety after delivery, and not the brawny white leg, which is rare; (*b*) in such thrombotic legs there are not necessarily signs pointing to sepsis, and such thrombosis is rather a blood change associated with or due to severe loss of blood at the time of delivery; (*c*) the thrombosis in most cases starts primarily in the uterine and pelvic veins; (*d*) such thrombotic legs are not brawny and white, but dusky in colour and œdematous, invariably painful, with definite "tender spots," and the femoral or saphenous veins are constantly felt to be thrombosed; (*e*) both legs may be affected, but always one after the other; (*f*) the onset of the disease is from about the tenth to the twentieth day; (*g*) pyrexia is the rule for a variable period, but does not necessarily indicate sepsis; (*h*) such cases run a definite course lasting from about six to eight weeks; (*i*) complications are uncommon—pulmonary embolism is the greatest danger; (*j*) the prognosis as regards life is good; and (*k*) the prognosis as regards the leg itself is not good; frequently it regains its normal condition, but in many cases it remains permanently damaged.

Dr. P. HORROCKS did not think that there was any evidence that some cases of thrombosis occurred apart from sepsis, and that others were cases of thrombosis and sepsis combined. If the increased coagulability of the blood due to excessive hæmorrhage were the cause the thrombosis ought to occur at the time of the labour, when the bleeding took place, and when the coagulability was at its highest point; it also ought to occur on both sides and perhaps in other parts of the body, whereas it was well known to affect one side only as a rule. To say that there was no evidence of sepsis, in the sense that there was no perimetritis or parametritis, was limiting the word sepsis to a very narrow meaning. In the most fatal form of puerperal fever there was, as a rule, no clinical evidence of either para- or perimetritis, and yet it was undoubtedly a septic disease. He believed that both of these classes (Nos. 4 and 5) were septic in origin, and he was not convinced that the microbe was different in the two sets. He believed that they were septic on the following grounds: (1) the left side of the cervix was more frequently torn than the right, and this would lead to septic infection on the torn side; (2) there was a more or less definite period of two or three weeks before the onset of the disease, which might be due to incubation; and (3) there was always more or less pyrexia, which could not be explained away on the hypothesis of mere clotting. Possibly ere long the microbe might be detected, and the differences might prove to be due to the relative amounts of vein or of lymphatics involved.

Dr. HERMAN suggested that the classification really had reference to "swelled leg," for some of the conditions included in it were not "white leg" and had never had this name applied to them. He agreed with Dr. Roberts in thinking that the disease commonly called white leg was not septic; if septicæmia was present as well it was a complication. He knew of no evidence that white leg had anything to do with septicæmia; but in the absence of information as to the comparative frequency of white leg before and after the introduction of antiseptics, or as to its bacteriology, it was not possible to be certain. He did not see in the table of cases any statement of the duration of the disease before the patient's admission into hospital. Possibly in some of them the non-pitting stage had been passed through before admission. He did not think that œdema from thrombosis was the same thing as the phlegmasia alba dolens the classical description of which was given by White of Warrington, afterwards of Manchester. He (Dr. Herman) was accustomed to teach that the solidity of the œdema in that disease was due to plugging of the lymphatics. No anatomical evidence of this existed; but there were good clinical reasons for that opinion. In lymphangitis extending up a limb from a poisoned wound the strip of inflamed lymphatics had the same brawny feeling as the whole limb had in phlegmasia dolens. In elephantiasis the lymphatics were known to be plugged, and the result was solid œdema like that of phlegmasia dolens, but persistent, and therefore leading to further changes in the limb. He had not understood Dr. Roberts to say that hæmorrhage caused phlegmasia dolens, but that it favoured it, which was, as he thought, undeniable.

Dr. AMAND ROUTH said that perhaps if Dr. Roberts had seen the cases in an earlier stage he would have found them more typical of "white leg." He had seen two cases where the initial symptoms were very severe but very transient—one quite recently in a patient who had nearly lost her life from post-partum hæmorrhage. On the third day she suddenly had acute pain in the left calf, and when seen three hours later had a temperature of 101 6° F., and the calf was swollen, with a circumference of two inches more than the right leg. The calf was quite white, extremely tense, glistening, and did not pit, and it had, in short, all the recognised signs of true phlegmasia dolens. Next morning the calf was less swollen, less white, and pitted, but the pyrexia remained, and on the tenth day the right leg became similarly affected. When the swelling and pain begin in the calf, and the femoral vein is free from tenderness and induration, it is obvious that any thrombosis which may exist in the popliteal vein has not occurred by extension of thrombosis. There can be no doubt that hæmorrhage is one of the elements in the causation of these cases, but why thrombosis should occur after the lapse of some days and not at once was difficult to explain. It was not easy to explain the presence of pyrexia, with perhaps an initial rigor, unless there was some sort of "sepsis" as another element in the cause of the lymphangitis, or, at all events, the blocking of the lymphatics, which so often was the first sign in these cases.

Dr. MACNAUGHTON JONES believed that the symptoms of phlegmasia dolens depended on the relative primary and secondary invasion of the veins or lymphatics and on the degree of cellulitis present. He thought that pressure did account for the disease in certain cases. He denied that sepsis alone was a cause, and attached no importance to the fact that the injury of the cervix was more commonly on the left side, but thought that there were anatomical reasons for the left leg being the one more commonly affected. "Painful spots" were not peculiar to any form of phlegmasia. High temperature was not to be taken as evidence of sepsis, as it occurred in various other post-partum conditions.

Dr. GRIFFITH said that Dr. Roberts's paper emphasised the distinction between true phlegmasia dolens and simple thrombosis. Hæmorrhage complicating labour was undoubtedly a very important factor in the causation of white leg, but the objection urged by Dr. Horrocks against its being the essential cause—namely, the considerable interval which elapsed between it and the appearance of the characteristic symptoms—applied with equal force to the theory of septic infection which he advocated. Thrombosis in both forms

of the disease, as a rule, started from the uterine veins and extended gradually to the common iliac, and it was not surprising that acute symptoms should arise when this great channel was blocked, nor was it necessary to suppose a further cause for them.

Dr. ROBINSON drew attention to the researches of Widal into the microbic origin of certain cases of phlegmasia dolens. This observer had found the clots in the thrombosed veins to be infiltrated with chains of cocci, probably streptococcus pyogenes. The walls of the veins had also been invaded by these organisms. Other observers considered that the bacillus coli communis played an important part in the causation of this morbid condition.

The PRESIDENT thought that Dr. Roberts's proposed classification was open to criticism; for instance, "cases due to pressure" (Class 1) might also be cases of "thrombosis apart from sepsis" (Class 4). Again, "cases associated with general disease" (Class 2) might also be "cases of thrombosis and sepsis combined." It would make it clearer if an instance of each type were given. A curious fact in the group of cases here recorded had not been referred to—viz., that three out of the four cases of double white leg (Cases 5, 8, and 10) began in the right leg. This was probably a coincidence, and might not appear in a more extended series of cases.

Dr. GILES noticed that in only one case—No. 14—was there undoubted sepsis, and it was the only one in which delivery was not at term; he thought that this was evidence that the ordinary white leg was not due to septicæmia. The reason assigned by previous speakers to account for the greater frequency of attacks in the left leg was not valid, inasmuch as injuries to the cervix would involve the connective tissue of the pelvis rather than structures so far off as the veins of the leg, whereas in nearly all Dr. Roberts's cases the pelvis was unaffected.

Dr. ROBERTS, in reply, said that he could not regard all cases of thrombosis as septic, pyrexia not necessarily indicating sepsis, and the onset of septicæmia being much earlier than it was in the kind of cases he had described. He thought that thrombi might be present in the veins of the broad ligaments without giving rise to physical signs in the pelvis. Probably extension of the clot either across the vena cava or the broad ligaments explained the implication of the other leg at a later date. In answer to Dr. Amand Routh, he had to explain that five out of the sixteen cases in the paper had been seen from outset to finish. He was sorry he could not specify the presentation in each of his cases, as this was not mentioned in the records from which they were taken.

The following specimen was exhibited:—

Dr. AMAND ROUTH: A Fœtus the subject of Anencephalic Diprosopia.

OPHTHALMOLOGICAL SOCIETY.

A New Operation for Ptosis.—Blood-staining of the Cornea.—Sudden Severe Hæmorrhage from the Conjunctival Surface of the Lid.—Exhibition of Specimens.

AN ordinary meeting of this society was held on May 2nd, Dr. D. ARGYLL ROBERTSON, President, being in the chair.

Dr. MULES brought before the society a New Operation for Ptosis. It was first described by him at the last International Congress of Ophthalmology at Edinburgh in August, 1894. He now gave the results of his further experience of its effect. The principle of the operation was to substitute the frontalis muscle for the levator palpebræ by extending the former muscle to the margin of the lid by a permanent wire suture. Two needles with eyes near their points were passed deeply through the frontalis tendon over the eyebrow, and their points brought out at the margin of the lid behind the lashes, taking up a substantial part of the tarsal cartilage on their way. A piece of silver wire was threaded through each needle, which was then withdrawn, leaving the loop of wire passing from the brow to the edge of the lid and back to the brow again. This was then tightened until the lid was sufficiently raised, the edge of the lid being slightly grooved by an incision to allow the wire to sink into the substance of the lid. One end of the wire was then passed under the skin and made to emerge by the side of the other end of the wire. The two ends of the wire were then twisted on each other until the lid was raised permanently, the ends were cut off, and the wire allowed to sink below the level of the skin. The skin at this point and at the lid margin healed over the wire, which remained permanently fixed in the substance of the lid. From further experience it was found that the wire remained in position without causing irritation; the lids could be closed, and remained closed during sleep. All kinds of wire had been tried, but it had been found that silver wire was the most satisfactory. It was necessary to note at the time of the operation the situation of the twisted end of the wire in case it became necessary to remove the suture afterwards.—The PRESIDENT drew attention to the correct principle of the operation in forming so direct a connexion between the frontalis muscle and the lid. He apprehended some trouble from irritation if the wire was left in for any length of time; it might also, he conjectured, cut its way through the tarsal cartilage or the muscle above, and so lose its effect. Former methods of remedying this defect were, he thought, unsatisfactory. The operation introduced by Snellen was too complicated; Everabusch's did not answer in severe cases, though it served well in slight ones; and that advocated by Panas was disfiguring and involved too extensive interference; the methods of operating with thread were, he thought, inefficient.—Dr. BRAILEY thought that in performing this operation it would be easier to introduce the needles from the lid margin, though he himself was content to use thread.—Mr. DONALD GUNN suggested that by passing both needles through an aperture over the brow the angle in the course of the wire would be avoided.—Mr. Spencer Watson, Mr. Lawford, Mr. Cartwright, and Dr. Ernest Clarke also discussed the relative merit of the operation.

Mr. TREACHER COLLINS read a paper on Blood-staining of the Cornea. He found that this staining of the cornea, which was of a greenish or reddish brown colour, was due to the presence of a number of highly refracting granules scattered throughout its substance. These granules were not located with any definite relation to the spaces between the laminæ of fibrous tissue; they agreed in their spectroscopical appearances and chemical reactions with hæmatoidin. He found that in some of the cases associated with granules of hæmatoidin there was a substance which gave iron reaction with ammonium sulphide, and which was probably hæmosiderin. In eyes in which this discolouration occurred the tension was generally increased, the exit of fluid through the angle of the anterior chamber being obstructed by the accumulation of blood clots. He was of opinion that at first hæmoglobin passed into the cornea from the anterior chamber through Descemet's membrane, and that the hæmatoidin, which is insoluble in the fluids of the cornea, was then precipitated there. The whole of the cornea was at first affected, and when this was the case the condition could not be distinguished from that in which blood clots completely filled the anterior chamber. The absorption of the hæmatoidin granules commenced at the periphery equally in all directions, so that by degrees a narrow ring of clear cornea appeared around the stained area. The appearances then presented were strikingly similar to those of a lens dislocated into the anterior chamber. The absorption of the granules becomes slower and slower the further they are removed from the sclero-corneal margin. He had seen one case in which the discolouration had completely disappeared in the course of about two years.—Mr. JESSOP described a case recently under his observation in which, after an injury to the eye, the anterior chamber was half filled with blood, which also occupied the interstices of the cornea and which disappeared in three days.—Mr. COLLINS, in reply, distinguished between the cases he described and that mentioned by Mr. Jessop, which was an instance of only temporary transudation into the cornea.

Mr. W. H. JESSOP read notes of Sudden Severe Hæmorrhage from the Conjunctival Surface of the Lid. A woman aged twenty-seven was taken to St. Bartholomew's Hospital in a state of collapse from repeated attacks of bleeding from the left eye. When seen the pulse was 130, small, irregular, and difficult to count; the extremities were cold and the right pupil dilated. On everting the lid there was found a small, jagged-edged ulcer about 1½ mm. in diameter in the middle of the palpebral conjunctivæ, from which bright arterial blood was flowing. The ulcer was burned by the actual cautery and treated with cold compresses. With one slight exception it gave no further trouble. Fourteen years before the patient had had erysipelas of the eye and nose on the left side, since which time the lid had been slightly swollen. There was no history of severe hæmorrhage or of hæmophilia, and there had been no accident. The patient had been married twelve months and had been pregnant seven months. The case was probably of nævoid origin, but it differed from the cases previously described by there being no marked sign of vascular

tumour. There had been only three cases described, but none of them had been quite like this one.—Mr. SYDNEY STEPHENSON described a case recently under his care of a girl aged eleven upon whom the operation of expression had been performed for trachoma. This was followed by spontaneous attacks of bleeding from the lid, which occurred off and on for more than five months. Though repeated examinations had been made directly the hæmorrhage was observed, he had not been able to detect the point from which it came; there were general redness and turgidity of the conjunctiva, and the closeness of the observation precluded the possibility of malingering. There was no anæmia, purpura, or scurvy, and the removal of a premolar tooth had not led to any unusual hæmorrhage, so that hæmophilia did not seem probable, though there was a history of swelling occurring three times, and lasting some days, in the knee-joints.

The following living and card specimens were shown:—

Mr. DONALDSON: Microscopic Specimens of Alveolar Sarcoma of the Cornea.

Mr. MARCUS GUNN: Symmetrical Spontaneous Dislocation of both Lenses.

Mr. MORTON: (1) Tumour of the Right Malar Region, probably Sebaceous; and (2) Persistent Hyaloid Artery.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.

Antipyretics, their Use and Abuse.—The Recognition and Treatment of Peripheral Neuritis.

A MEETING of this society was held on May 3rd, Dr. BANNING, the President, being in the chair.

Dr. WILLIAM HUNTER read a paper on Antipyretics, their Use and Abuse. He pointed out that the extent to which antipyretic agents were used and their manner of employment were greatly influenced by our views of fever. In its simplest aspects, as it presented itself in the lower animals, fever might be looked upon as a reparative process, but in man, owing to the higher organisation of his nervous system, it greatly lost this character, and the febrile process invariably tended to be much in excess of any possible requirement and to become a source of danger. After considering the analgesic properties of the more recently introduced antipyretics derived from coal-tar products, such as antipyrin, phenacetin, and antifebrin, he remarked that the control of the nervous system was one of the principal desiderata in the treatment of fever. The proper object of such drugs was, however, not to abolish fever by a summary process, as was at first expected and attempted, but rather to bring the febrile process within reasonable limits. More particularly in severe sthenic cases, where the temperature rose above 104°F. and was likely to rise higher, it was desirable to reduce the temperature 1° or 2°. The administration of these remedies should always be cautious, more particularly in the case of antifebrin, the dose of which, as given in books (3 to 10 grains) is much too high; it ought rather to be from 1 to 3 grains. Their best effect is obtained when cold sponging is employed as an adjunct.—The PRESIDENT had found that no antipyretic equalled, either in efficiency or in safety, the use of cold sponging and wet packs.—Dr. SYMONS ECCLES believed that the direct action of antipyrin, though commonly considered to be stimulant to the heat centres, could also be attributed to its reducing qualities, removing oxygen from the protoplasm of the nerve cells, and thus diminishing activity and producing analgesia. He could not altogether agree with Dr. Hunter that the high temperature of man is of nervous origin and peculiar to him; he believed that animals suffered also from nervous manifestations, which might be due to excessive oxidation produced by nature in order to get rid of leucomaines or other toxines. In neurasthenia the rise and fall of the tide of leucomaines in the blood coincided with the periodical attacks of depression, malaise, and all the vague but real discomforts felt by neurasthenics. He thought that toxæmia would in the future be regarded as a probable, if not a constant, factor in functional nervous disorders.—Dr. ATKINSON had not found any benefit to follow the use of antipyretics, and thought that, as the temperature always fell before death, high temperature by itself would not kill a patient.—Mr. MACADAM ECCLES referred to surgical cases where high temperature was due to nerve influence, alluding specially to cases of head injury followed by high fever without sepsis, and to so-called catheter fever. He pointed out that after injuries of the head the temperature was often different on the two sides.—Dr. HUNTER replied.

Dr. CAGNEY read a paper on the Recognition and Treatment of Peripheral Neuritis. He quoted cases to show that in many instances of alcoholic neuritis there was a danger of administering alcohol for the relief of symptoms which were in reality due to that poison. He discussed some points in the causation of neuritis and cited cases showing a remarkable individual susceptibility, both inherited and acquired. He maintained that a combination of toxic states was most often the probable cause of neuritis, and quoted illustrative cases. He urged that in view of the great importance of the early recognition of peripheral neuritis, and the certainty of detecting it in all cases where the motor system was involved, every medical man ought to make himself familiar with the very simple methods of electro-diagnosis.

LIVERPOOL MEDICAL INSTITUTION.

Enterostomy for Foreign Bodies.—Two Cases of Compound Depressed Fracture of the Skull.—Trephining for Subdural Hæmorrhage.—Eye Cases.—Painful Digestion in Chlorotic and Hysterical Persons.

A MEETING of this society was held on May 2nd, the President, Mr. CHAUNCY PUZEY, being in the chair.

Dr. ALEXANDER related a case where he had performed Enterostomy and had removed a very large number of plum and other fruit stones from the lower part of the ileum, close to the cæcum.

Mr. ARTHUR WILSON read notes of Two Cases of Compound Depressed Fracture of the Skull.

Mr. DAMER HARRISSON related a case where he had successfully Trephined for Subdural Hæmorrhage. For many months the patient was unable to talk or to express himself by writing, but he ultimately made a good recovery.

Mr. BICKERTON showed a man on whom he had performed Mules' Evisceration Operation, and another patient from whose eye he had removed a piece of glass three-quarters of an inch long.

Mr. GEORGE WALKER showed several patients illustrative of the treatment of Posterior Adhesions of the Iris, the synechiæ having been separated from the anterior capsule of the lens by means of an ordinary cataract needle.

Dr. GLYNN read a paper on the Painful Digestion common in the Hysterical, and its Diagnosis from Gastric Ulcer. He pointed out that the symptoms (pain, especially after food, perhaps relieved by vomiting, and occasionally hæmatemesis) were met with in merely functional disorder as well as in ulcer of the stomach. Many of the cases of either disease were relieved by a course of milk and lime-water, so that the test of treatment failed to be of any assistance. He pointed out that nervous dyspepsia of the hysterical was very frequently met with in the chloro-anæmic, and stated that he had found that the chlorotic were almost invariably hysterical, and that they presented the stigmata of hysteria, including restriction of the visual fields. He considered the various pains and hyperæsthesia the chlorotic suffered from were due to the hysterical condition. The most convenient indication of hysteria to be sought for in the preliminary investigation of a suspected case was tremor of the eyelids. The few chlorotic girls who betrayed no symptoms of hysteria did not, as a rule, suffer from neuralgias and painful digestion. He discussed certain symptoms of nervous dyspepsia—the character of the pain and its relation to the ingestion of solids and liquids, and compared them with those of gastric ulcer. The diagnosis of the dyspepsia of the chlorotic and hysterical from the dyspepsia associated with gastric ulcer was rendered especially difficult as the latter affection was also so frequently accompanied by hysteria and chlorosis. He considered it likely that the pain which often attended gastric ulcer was due to the fact that this lesion often co-existed with hysteria and hysterical neuralgias, more especially when the patient was exhausted and anxious. In the cases of latent ulcer, where the earliest symptoms were hæmatemesis or the signs of perforation, the patients were usually in good health. He considered that the nervous dyspepsia he

described was a hyperæsthesia of the stomach, best treated by general measures and not by drugging.—Dr. A. C. E. HARRIS agreed with Dr. Glynn in distinguishing anæmia from chlorosis. It was in the latter class that painful digestion was met with, but only in about a third of the cases, and that among those who did hard manual labour. He considered the gastric pain to be due to hyper-acidity and benefited by alkalies; in fact, the success of Blaud's pills and capsules at first is probably due to the potash they contain. If the gastralgia does not yield to Blaud's treatment, larger doses of alkali remove the pain and then iron completes the cure.—Dr. HENRY HEAD accepted Dr. Glynn's classification of painful digestion, and pointed out that it included all those cases where food caused pain, mostly associated with tenderness in the superficial structures of the thorax, abdomen, and back over the areas of the sixth, seventh, eighth, and ninth dorsal segments; but disturbance in any other organ also supplied from these segments will cause the ingestion of food to be painful. Thus rapid implication of one base of the lung (as in tuberculous phthisis) or rise of pressure in the left auricle (as in mitral stenosis) will cause pain and tenderness of one or more of these areas, increased by the ingestion of food. Excluding these reflex gastralgias, we find a great group with gastric ulcer at one pole and anorexia nervosa at the other, with the gastralgia of chloro-anæmia as an intermediate link.—Mr. YOUNG and Dr. GILL also took part in the discussion on Dr. Glynn's paper.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Infantile Convulsions.—Toxic Affections of Vision.—Apparatus for the Administration of Anæsthetics.—Exhibition of Case.

A MEETING of this society was held on May 1st, Dr. TEW, President, being in the chair.

Dr. FFENNELL read a paper entitled "Some Observations on Fifty-nine Cases of Infantile Convulsions." He remarked on three points which did not tally with the opinions laid down by acknowledged authorities—viz., that two of the above cases appeared undoubtedly to be caused by round-worms; that in four the pupils were extremely contracted; and that only two presented any symptoms of rickets.—Remarks were made by the President, Dr. Ransom, Dr. Hunter, and Dr. Watson.

Dr. LAWS read a paper on Toxic Affections of Vision. The clinical features of a case of toxic amblyopia were first described, together with the methods of testing for the central scotoma; and it was remarked that the progress of the disease followed the course of development of the visual functions, the more specialised being the earlier attacked. After a short historical sketch of the researches that had been made on the subject since the publication of Mackenzie's work in 1830, the pathology of the affection was discussed, with especial reference to the question of whether the lesion in the optic nerves was of the nature of an interstitial inflammation or a primary degeneration of nerve fibres with secondary overgrowth of connective tissue. Adopting the latter view, Dr. Laws pointed out the analogies of the process with the system diseases of the spinal cord, and particularly with tabes; in both an afferent tract of fibres, marked out by its function and development from those among which it lay, was affected by degeneration, and in both a certain tissue liability was indicated by the existence of a hereditary form of the disease; the cause in the one case being a chemical poison circulating in the blood, while in the other there was no inherent improbability in the view that it might be a toxæmia. After some remarks on the differential diagnosis of toxic amblyopia Dr. Laws concluded by urging that in cases of pallor of the discs and suspected chronic disease of the nervous system the very simple test for a central colour scotoma should be included among the methods of investigation.—The President, Dr. Ransom, Dr. Kingdon, Mr. Macmillan, and Dr. Tresidder discussed the subject.

Dr. BELL TAYLOR exhibited a new Apparatus for the Simultaneous Administration of Ether and Nitrous Oxide Gas.

Dr. BELL TAYLOR also showed a man upon whom he had previously operated for Cataract before the society.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Palliative Treatment of Jaundice caused by Malignant Obstruction.—Probable Lesions in Incipient Caseous Pulmonary Phthisis.—Exhibition of Cases and Specimens.

THE ninth meeting of this society was held on May 1st, Dr. CLOUSTON, President, being in the chair.

Dr. WILLIAM RUSSELL read a paper on the Palliative Treatment of Jaundice from Malignant Obstruction. He narrated the case of a patient eighty-five years of age (but looking considerably younger), who in the early part of 1894 began to suffer from slight dyspeptic symptoms, accompanied with a suspicion of jaundice. The jaundice was at first ascribed to obstruction from duodenal catarrh, but did not yield to treatment. After a time palpation of the abdomen revealed an elongated structure, somewhat firm, tough, and resistant, which lay over the aorta, and was believed to be the pancreas. There seemed to be no implication of the pylorus in the disease. The liver was slightly enlarged, but otherwise normal. The distended gall-bladder was felt as a pyriform elastic body in the axillary line immediately under the tenth rib. The patient complained of a general sense of malaise, aversion to food, and continuous nausea. Operation was suggested in the hope of relieving the symptoms, but the patient declined. Having remained much in this condition for three months, with her strength gradually failing and the discomfort continuing, she became anxious to submit to any operation which might alleviate her symptoms, and was accordingly removed to Mr. Cotterill's ward in the Edinburgh Royal Infirmary. The case was believed to be malignant disease of the head of the pancreas without any implication of the stomach or liver; it was considered that there was no occlusion of the cystic duct, and so to tap the gall-bladder would effectually drain the retained bile. Mr. Cotterill accordingly operated. The patient lived for thirty hours. It was doubtful if she would have lived longer had she not been operated upon. At the necropsy the diagnosis was confirmed in every detail. The case raised the important question whether the operation might be regarded as legitimate, being merely a palliative measure. To operate for the removal of calculi was legitimate and necessary. Dr. Russell thought that it was justifiable to operate in the hope of relieving the misery and discomfort of a deepening cholæmia, and that the present operation was as humane a proceeding as tracheotomy in malignant laryngeal disease. Had the operation been performed when first suggested the patient might have been alive still. If the stomach were involved and gave rise to prominent symptoms he did not think the operation would afford sufficient relief to warrant its performance. Even obvious implication of the liver would not necessarily be a contra-indication so long as distension of the gall-bladder showed that the hepatic duct was not blocked.—Mr. JOSEPH BELL remarked that Dr. Russell's paper was short, accurate, and descriptive, and supplied food for thought. He agreed that an endeavour should be made to relieve such cases.—Dr. GIBSON had watched a similar case on which a colleague had operated. The relief after operation was very great indeed. It had been stated that drainage of the entire bile from a patient for his natural life did no harm in a case which had been operated on for non-malignant stricture of the biliary canal.—Mr. HODSDON raised the question whether in cases of malignant jaundice it was not safer simply to drain the gall-bladder than to perform cholecystenterostomy.—Dr. LEITH gave an account of the post-mortem examination and made some remarks.—Dr. RUSSELL replied.

Dr. R. F. C. LEITH read a paper on the Probable Lesions in a case of Incipient Caseous Pulmonary Phthisis of over four years' duration, with no physical signs, but with abundant bacilli in the sputum, together with some remarks on their diagnostic and prognostic value. The patient, a man forty-three years of age, sought advice on account of a hydrocele. He had a slight cough, especially in winter, but his general condition seemed very good, his height being five feet ten inches and his chest measurement thirty-three inches and a half during expiration, expanding three inches during inspiration. His chest showed no physical signs of disease, but on staining some of his sputum, which seemed to consist entirely of transparent sticky mucus and was small in quantity,

numerous tubercle bacilli were found, presenting almost the appearance of a pure culture. As no physical signs could be discovered in the chest and as there was slight huskiness of the voice, primary laryngeal tuberculosis was suspected, but the laryngoscope showed the parts to be normal. After a month's holiday in the country the sputum almost entirely disappeared, and there was only slight occasional morning cough. He remained much in this condition for the next two years. In February, 1893, the patient passed through an attack of acute appendicitis, and while convalescing from this the chest condition made considerable progress. The sputum increased in amount, became purulent, and prolonged expiration with numerous moist sounds were observed in the second interspace on the right side close to the sternum. The patient was sent to Torquay for three months, where he made very rapid improvement and increased in weight, the sputum diminished, the signs in the lungs disappeared, and he is now in good health, being able to walk from twenty to thirty miles, and enjoying amusements in moderation. The sputum still contains bacilli. To all intents and purposes he is as well now as he was four years ago. Dr. Leith discussed the case at considerable length and dwelt on the frequency with which cicatrised tuberculous lesions were found in the lungs after death. In about 1400 post-mortem examinations in the Edinburgh Royal Infirmary he had noted such lesions in about 12 per cent. of the whole. In the present case he considered, from the large number of bacilli present in the sputum, that there was probably cavity formation in the lung. He discussed the importance of the tubercle bacillus from a diagnostic and prognostic point of view.—Dr. PHILIP thought the paper contained three main points of interest—viz., the abundance of the tubercle bacillus, the relative duration of the case, and the comparative absence of physical signs. He thought they could enumerate a large number of cases lasting, not four years and a half, but ten or twelve years, when the course was very chronic. In many cases there were few physical signs for the first five, six, or seven years.—Dr. RITCHIE and Dr. CLOUSTON having spoken, Dr. LEITH replied.

Dr. LEITH showed a case of Caseating Pulmonary Phthisis of four years' standing. The patient formed the subject of the paper which had just been read.

Mr. A. G. MILLER showed a man whose Arm had been amputated through the Elbow for Cancer of the Hand and Forearm.

Dr. LUNDIE and Mr. ALEXANDER MILES showed cases of Skin Grafting from the lower animals.

Dr. W. ALLAN JAMIESON showed a case of Impetigo Varioliformis; a case of Erythema Perstans; a case of Exfoliative Dermatitis limited to the Hands and affecting to a slight degree the sides of the Feet in a man with general but mild Ichthyosis and Hyperidrosis Pedum; and a case of Scorbutus.

Dr. LEITH exhibited the Temporal Bone of a girl fifteen years of age who died from Cerebral Abscess. The middle ear was caseous, and the tympanic membrane, which showed a perforation, was ossified.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Defective Infantile Life Unrecognised by State Medicine.—Private Hospitals or Home Hospitals.

A MEETING of this section was held on April 19th, Dr. T. W. GRIMSHAW being in the chair.

Mr. WALTER BERNARD of Londonderry read a paper on the subject of Defective Infantile Life Unrecognised by State Medicine. He argued that it is the duty of the State to foster every movement and encourage every effort to disseminate knowledge in diagnosing those conditions of society which are unfavourable to true national progress. General medical practitioners having done more successful work in the prevention of insanity and abnormalities than any other medical or social organisations, they are the earliest and most efficient observers of the abnormal in infantile life. Each stage of mental growth ought to be carefully investigated, not by far-reaching researches, but by domestic clinical work and family and personal histories, through which only can a practical psychology of infant and child life be attained. The primary object to be attained is to teach the importance of order, thrift, and cleanliness in the management of feeble children. Contractures and arrests of development are generally associated with an enfeebled and easily disturbed nervous system. In such cases the enfeebled senses obtain much unconscious guidance and perfection by the exercise of the muscles of the deficient or rigid limb, the latter more especially by posture, as in the Gower methods. Consequently, in a minor degree, a kindergarten and gymnasium are indispensable in the household. Hygiene in the home is essential, opening up the way to clearer ideas on the subjects of infant sanitation and infant life. The principles which suggest early promptitude in detecting, arresting, and dealing with mental imperfections in infantile life are not sufficiently recognised by State measures. If the family medical attendant's hands were strengthened by a system of jurisprudence framed, confirmed, and recommended by State medicine, it would tend to improvement in the formation of character in the initial stages of existence.—Dr. J. W. MOORE said that the Academy owed a debt of gratitude to Mr. Bernard for bringing forward this subject. Within the last decade or two there had been a wonderful change regarding the value put on the life of children, and the death-rate among young children had been steadily falling. In the great cities there were many philanthropic associations whose sole object was the improvement of childhood, such as Mr. Barnardo's in London.—Sir W. STOKES referred to the importance of educating people, and this more particularly in Ireland, to a better knowledge of how to cook their food. He believed that one of the main causes amongst the poorer class of having recourse to the public-house was the want of properly cooked food in their homes. A great many physical and mental troubles were due to intemperance.—Dr. NINIAN FALKINER said there were two defects possible in infantile life, one physical, and the other mental. Referring to the mental impressions received during childhood, he considered that a great many of the unfortunate careers of men and women were due to immoral suggestions made to them in their infancy by nurses.—Dr. RAINSFORD said he had had three years' experience in a very large lunatic asylum, and thought that the early training received in childhood had a great effect on the after-life of the individual. Considering the manner in which children are brought up in large cities, it is a marvel that criminals are not more numerous.—The CHAIRMAN regretted that medical men were not taught to advise as to the bringing up of children. If children are not looked after much harm is done both to them and to their children, if they ever have any. There was no doubt that infants could be educated from the cradle. With regard to the question of nurses, referred to by Dr. Falkiner, he thought great damage, both physical and mental, was done by them. The practice of lying was learnt in the nursery. These evils were produced by the mothers paying others to do what they should do themselves. In almost every instance in which the Society for the Prevention of Cruelty to Children, of which Dr. Rainsford was the medical officer, proposed to start a branch in any town, they were met with the reply that they knew how to take care of their children. The clergy were especially strong in this opinion. The introduction of the School Board system into England has had the effect of catching a great number of street arabs. There were two institutions in Dublin—one Protestant and the other Roman Catholic. The reports of these institutions were of the most encouraging kind. With reference to cookery, he had heard the following anecdote. A parish priest went to a house about dinner hour and asked when the man would be in, and was told "Presently." He asked the wife where the man's dinner was. She replied, "In the press," where there were cold meat and potatoes. On further questioning, she said that it had been cooked for two or three days. This was the way in which the husband was treated when he came home. The number of uncertified deaths in Dublin was appalling. It meant either that a medical man was not called in at all or that he was called in so late that he was not able to give a certificate of the cause of death.—Mr. BERNARD, replying, said the Jubilee nurses had been the means of enabling ladies to visit the poor people and teach them cooking, thrift, and cleanliness. If rules were formulated by the State insanity would be diminished. The lower classes carry out the rules as well as the upper classes.

Dr. J. W. MOORE read a paper entitled "Private Hospitals or Home Hospitals." He said that the institution and administration of a private hospital call for the exercise of

exceptional mental and bodily powers, and are quite incompatible with the practice of the medical profession. Such establishments should be subject to inspection by the sanitary or some other responsible authority and should be conducted on sound financial principles. The term "home hospital" is better than private hospital, the object being to provide for the sick a home where they will be cared for by skilled hands under the direction of their attendant physicians or surgeons and amid the best possible surroundings from a health point of view. A "home hospital" should be a detached building, heated, ventilated, and lighted on the most approved lines, and specially constructed for the purpose on an eligible site. The sanitary arrangements should be above suspicion. It should be licensed and freely open to periodical and systematic inspection by the sanitary authorities of the district in which it stands. It should be managed by a committee the members of which would inspire confidence and command respect, and to which the officials would owe allegiance. Its finances should be controlled by this committee, and a report and statement of accounts should be published at least once a year. If all this were done private hospitals would be worthy of the name, and in them persons of refinement and culture might, when suffering from sickness or injury, enjoy the advantages of medical or surgical care and good nursing together with that privacy and quiet which in such cases so largely conduce to comfort and even to recovery.—Sir W. STOKES regretted that he could not agree with much of what Dr. Moore had said. He had had experience of no less than five of these hospitals, and while admitting the importance of having the best hygienic surroundings possible he did not think that these institutions deserved the very severe strictures made upon them. If they were so bad they would long since have ceased to exist. He had treated many important surgical cases in them and had never heard any complaints. Many of the largest institutions in London, as St. Bartholomew's and University College Hospitals, were situated in densely populated localities. Inspection did not do any good, and it would take away the privacy of the hospitals.—Dr. PARSONS said they had to make the best of what they had. The patients had far more quietness in these hospitals than in their own homes. He did not think that they should be inspected. If they were not properly kept medical men would not send their patients to them. These hospitals were very useful for treating patients who were too well off to be treated in an ordinary hospital.—Mr. SAVAGE had had some medical cases in a private hospital and was very much displeased with the treatment they received. There was nothing to be gained by sending medical patients to these "home" hospitals. He thought Dr. Moore would have spoken more of "home" hospitals for infectious diseases. During epidemics (as of scarlet fever or small-pox) they should charge a reasonable fee for these rooms and have whatever practitioner the patient wished to attend him.—Mr. THOMPSON said it would be difficult and expensive to get detached buildings. In some of these hospitals the attendance and nursing were very good, and everything was ready on the spot.—Dr. J. W. MOORE replying, said he granted that these hospitals were a necessity. He wanted them put on a sound financial and sanitary basis. Not long ago a partner in one of them told him that it did not pay. The sanitary authorities would very soon have to take the matter in their own hands. He could produce positive evidence that these hospitals are a growing scandal.—Mr. BERNARD said that there was a strong feeling in the north-west of Ireland that there were too many private hospitals in Dublin. Some of his own patients complained of the noise and insufficient nursing in them.

BRITISH MEDICAL BENEVOLENT FUND.—At the monthly meeting held on Tuesday, April 30th, the committee had to postpone the consideration of two-thirds of the cases before them owing to lack of funds. To applicants this means terrible disappointment and privation, as £30 per annum is considered a bar to assistance. The committee urgently press this deplorable position upon the attention of the more fortunate members of the profession, and ask for subscriptions or donations to enable them to meet this deficiency. Contributions may be sent to the Treasurer, 34, Brook-street, W.; to any of the officers; and especially to Dr. Samuel West, 15, Wimpole-street, hon. financial secretary.

Reviews and Notices of Books.

Descriptive Catalogue of the Pathological Specimens contained in the Museum of Guy's Hospital. Third Edition. Vol. I.: Morbid Conditions of the Respiratory Organs and Alimentary Tract. By LAURISTON E. SHAW, M.D. Lond., F.R.C.P., Assistant Physician and Curator of the Museum; and E. COOPER PERRY, M.A., M.D. Cantab., F.R.C.P., Assistant Physician and Demonstrator of Morbid Anatomy. London: J. & A. Churchill. 1894.

THIS catalogue, which must almost be looked upon as a third edition of a classic work, will be welcomed, not only by students, present and past, of Guy's Hospital, but by every active worker in pathology. The first edition, edited by Hodgkin, was published in 1829, whilst the second, edited by Dr. Samuel Wilks and the late Dr. Habershon, appeared in seven parts between the years 1857 and 1863. The editors of the present volume have somewhat altered the plan of the work, and have apparently given a large amount of time and care to the verification and correction of the specimens catalogued. They say "that the greater number of preparations described in this volume have been submitted to further examination and dissection before being remounted, and the descriptions given of them have almost in every case been rewritten upon a uniform plan. All references to post-mortem inspections have been verified, and, in the belief that the study of a pathological specimen is made at once more interesting and of more practical utility when combined with a study of the history during life of the case from which the preparation has been derived, clinical accounts have, wherever possible, been appended to the descriptions of the specimens, and where they were already given in the old catalogue they have in many cases been amplified." They have also examined microscopically many of the specimens which they considered were probably open to reclassification. Taking it altogether, the work is exceedingly well done. Each section includes a special part of the respiratory organs or alimentary tract; for example, in Section I. are given the Injuries and Diseases of the Larynx; in Section II., Diseases of the Thyroid Gland; in Section III., Diseases of the Thymus Gland; and in Section IV., Injuries and Diseases of the Bronchial Tubes; and so on through twenty-four sections, the last of which is devoted to Injuries and Diseases of the Peritoneum. At the head of each section is given a list of the groups of specimens—thus, congenital malformation, 1; eversion of sacculus, 2; injuries, 3 to 10; foreign bodies, 11 to 14—and so on through various groups, as examples of which may be mentioned tubercle, variola, typhoid fever, hypertrophy of muscles, polypus, carcinoma, &c. It will thus be seen that a regular plan has been adhered to throughout the work, and this methodical arrangement renders the catalogue exceedingly useful for reference, though it may interfere somewhat with its value for purposes of teaching. This, however, is very much a matter of opinion and depends frequently upon the method of teaching adopted. The work of description is most carefully and accurately done; the descriptions are not too long, and the detail is not too great, so that the attention is not distracted by insignificant details from the main features of the specimen under review. From the method of arrangement most of the references to the specimens are readily found, but we anticipate that to make them still more accessible the editors, on the completion of the catalogue, will find it well to give an index with full cross references. By doing this they would add greatly to the value both of the catalogue and of the collection. We congratulate the editors on the admirable scheme they have drawn up, and also on the way in which they have carried it out.

The Spirit of Cookery. By J. L. W. THUDICHUM, M.D., F.R.C.P. Lond. London: Bailliere, Tindall, and Cox. 1895. Price 6*s.*

We had read a great part of this book with much enjoyment, and had made up our minds from all we read, and also from the fact that both title-page and cover declare it to be "A Popular Treatise on the History, Science, Practice, and Ethical and Medical Import of Culinary Art," that it was not intended for the powers that be in our kitchens, but for their masters and mistresses, when a perusal of the preface showed us our mistake, for Dr. Thudichum says: "In the present treatise it has been attempted to produce such a system of general rules as will enable those who thoroughly master them to perform the principal culinary operations without reference to the frequently unintelligible records of the details of mere empiricism." As very few mistresses in these days can "perform culinary operations" without promptly receiving "notice" that the cook wishes to leave, the book must be designed for that functionary herself. We fear, however, that no cook, let her be ever so efficient, will understand Dr. Thudichum's English. There is no need for her to understand that she is a professor of the "magiric" art or science, but she is certainly very unlikely to do so, and what will she make of "soups characterised by molluscs and articulates," of "triturating," or "volatilising" an ingredient, or of the statement that "cooking destroys the toxicity of mussels," and will she know what is demanded of her when she is told to "comminute" something in a mortar, or to do something "concurrently" with another? She may have some perception of what is meant by "overtoning the weakness of a broth," but is she likely to have any idea as to what "the production of artefacts" may be, and will she not resent it when she finds that when making a boiled apple pudding she puts her apples into a paste made of flour and suet she is placing them in a capsule! As for Dr. Thudichum's definition of a pudding she would unhesitatingly laugh it to scorn. "A pudding is mostly, if we may be allowed to use an expression from petrology, a *breccia*—a compound formed of fragments of a material which had a previous independent existence, and bound together by a soft mortar or cement which was able to penetrate and fill the pores of, and intervals between, the lumps, and then become set by the culinary thermic process. It is by this that pudding becomes a unity and receives a kind of gustatory homogeneity, however numerous and diversified may be the substances introduced into its constitution." Alas for human cooks who have to master these hard sayings "concurrently with the preparation of the dishes" to which they refer—that is, if the book is meant for cooks. Alas for most mistresses if the burden is laid on them! Cooks and mistresses are but mortal, and, besides that, may have as much dislike to cumbrous, latinised, and gallicised English as we ourselves have. To "gratinate" is not a household word, and to find out what an "ensouped entrée" or an "inspissated broth" is, or how to add "a collateral *consommé*," or grasp the difference between "bottom heat, radiated heat, and conducted diffused heat" might cost more time and temper than either mistress or maid had at her command. If Dr. Thudichum had but written good, honest, straightforward English we should have had nothing left to desire. "The Spirit of Cookery" is full of information of every kind; men as well as women will delight in it, and no one can open it without finding something which he (or she) has always been longing to know. To a housekeeper in the true sense it will be simply invaluable.

Dr. Thudichum is severe on the delusion that bones and scraps can by good cooking produce excellent and nutritious soups; he maintains that this can only be done when due care has been taken to "*faire sourire le pot au-feu.*" He gives a good sketch of the historic literature of cookery, enunciates excellent culinary axioms, and explains French culinary names. "*A la Gérard,*" it seems, is a name sarcastically applied to a dish that is a failure, because a cook long ago prepared one which was to be set before Madame de Maintenon and called by her name, but prepared it so badly that he did not think it good enough to bear her name, and gave it his own. We are told a great deal about spices and condiments of all kinds. This part of cookery is to our mind of the most sad and sorrowful description; for so many dishes depend on a delicate adjustment of flavour, and cooks trust to rule of thumb and mother wit. A cook's thumb is clumsy, her palate blunted by frequent tastings, and she makes up a fierce and fiery compound and thinks she has done the whole duty of woman. What cook, too, would afford "*beef à la mode*" the indulgence prescribed by the "Tabella Cibaria?" "It must be allowed to muse gently for several hours, inaccessible to the ambient air, and on the even and persevering heat of charcoal in furnace or stove. After having lulled itself in its own exudations and the dissolution of its auxiliaries it may appear at table with a powerful claim to approbation." Dr. Thudichum's sympathies are very properly all-embracing. "Frogs' thighs," he says, "yield a bland broth and are improved by the addition of snails"—vineyard snails, be it well understood—and he gives recipes for the *olla puchero*, and national dishes of all kinds. There is as much incongruity and variety in the composition of Joan Cromwell's "Grand Salad" as in the "various peoples, nations, and languages" over whom our Queen rules. "It is composed of equal parts of almonds, raisins, capers, pickled cucumber, shrimps, and boiled turnips. It may be made with cream, oiled butter some good jelly of meat, Florence oil, and flavoured with salad mixture, vinegar, lemon, and herbs." We are puzzled by a "Duneim of mutton." It seems to be a more elegant haggis, but, though familiar with the erewhile Palatinate, we never heard of the dish. Nor is Dr. Thudichum quite accurate in his account of the making of the "griddle or girdle cake." Griddle, by-the-bye, is only the local pronunciation of girdle. Those who say griddle would also say girn for grin. A griddle cake is not "baked on the free fire," but suspended by the bow of the girdle to a hook above the fire. He is also wrong in saying "an inhabitant of an English town of the present time has probably little inducement to bake a griddle cake, but if he were to be transplanted to Central Africa, or the Brazils, or the Yellowstone regions he might perhaps draw some consolation and nutriment out of so simple a preparation of the gifts of Ceres." At this present time no well-to-do house in the north is without girdle cakes at tea—it would be a bitter disappointment were it otherwise, and they are made as delicacies in every cottage. The pitmen call them "singing hinnies" (hinny is honey, a term of endearment), the over-prudent call them "sudden death," but eaten in moderation they will, to use one of Dr. Thudichum's expressions, "molest no delicate stomach."

LIBRARY TABLE.

Schemata zum Einzeichnen von Gehirnbefunden. (Diagrams for Cerebral Jottings.) By Professor KALISKO and Dr. REDLICH. Leipzig und Wien: Franz Deuticke. 1895.—This is a small packet of diagrams of different aspects of the brain, so designed that the site and extent of a lesion can be readily and distinctly indicated. It contains an introduction illustrating the method of using it. From the appearance of the plates and the eminence and experience of the authors we have little doubt that pathologists and others will find them useful.

Manuel de Percussion et d'Auscultation. By Dr. P. SIMON. Paris: Félix Alcan, Editeur.—This manual is an elementary introduction to the arts of percussion and auscultation.

dealing with them from their practical and their theoretical sides. Besides an account of auscultation of the cardio-vascular and pulmonary system there is a chapter on Auscultation of the Digestive Tract, and also a full explanation of the uses of this art in obstetrical practice. The book should prove a useful aid to those working practically at these subjects.

Origen Poliédrico de las Especies (*Polyhedral Origin of Species*). By ARTURO SORIA Y MATA. Madrid. 1894.—The author seems to have amused himself by making a number of four- and five-sided pyramidal figures in cardboard and crossing them in various ways so as to form what he calls betatetrahedra and pentatetrahedra of various forms, which he persuades himself have certain relationships with the sexes, with chemical bodies such as acids and bases, and also with musical notes and intervals and even with colours. The, to him, obvious connexion between the origin of the human species and the starfish is shown by drawing a child with its arms and legs stretched out so that the limbs with the head point to each of the five angles of a "dodecahedro-icosahedral closed chain," the axes passing through the child's umbilicus. After this we learn in a chapter headed "Genius and Madness" that the former is but a variation in the disposition and grouping of regular or healthy polyhedra, the latter being a grouping of polyhedra which are not perfectly regular, and at the end it is suggested that the change from venous blood to arterial and *vice versâ* is probably merely a change of shape of the molecule from a dodecahedron to an icosahedron or the contrary.

MAGAZINES.

The Practitioner.—The current number of this publication is as interesting as usual. Its opening article is a carefully written account of the Schott method of treatment by Dr. John Broadbent, with remarks on the mode of action of the treatment by Sir William Broadbent. Following this is an eminently interesting article on the House in its Relation to the Prevention and Treatment of Disease. Unfortunately, though, as Dr. G. V. Poore, the author of the paper, remarks, his recommendations are mostly only possible when the house is surrounded by a certain amount of ground, and this in London is very difficult to obtain. Dr. Braithwaite writes interestingly about the relation between a lack of animal food and diseases of the female generative organs. The Medico-Literary Causerie deals with Medical Poets. Reviews, Notes of the Month, Pharmaceutical News, and abstracts from foreign journals complete the number.

Chapman's Magazine.—The latest addition to the number of monthly periodicals is a very notable one. Issued by the great publishing house of Chapman and Hall, under the able editorship of Mr. Oswald Crawfurd, *Chapman's Magazine* marks the beginning of a new era in periodicals. The contents are entirely fiction—dramatic fiction,—all eminently readable, and there are no illustrations. Mr. Bret Harte opens with the first instalment of a Californian story worthy of the creator of "M'liss," and Mr. Anthony Hope follows with four brilliant little social dialogues. Mr. Stanley Weyman contributes a little episode dealing with Henry of Navarre, and Mr. Brett a detective story which is exciting; but the deductions which the "country surgeon who made the post-mortem" draws are scarcely warranted by what he is said to have found. Mr. James Payn has a good story of a ghostly "sell," and Mr. Frankfort Moore an amusing social sketch. The solitary lady contributor, Miss Violet Hunt, in the opening chapters of her serial, "A Hard Woman," fully bears out the good opinions she gained by her first novel, "The Maiden's Progress." Her light hand and delicate literary rapier-play are as conspicuous as ever. The number ends with a poem by Mr. John Davidson. The get-up of the magazine is excellent in every way, and the cover artistic; only, if Mr. Crawfurd would induce his printer to fold the pages in a less exasperating way, it would be a relief to the reviewer who has to cut them; but the magazine is certainly a wonderful sixpennyworth.

The Contemporary Review.—The two most readable numbers in the *Contemporary* for this month are "Virgil in the Country," by the Countess Martinengo Cesaresco, an article redolent of the spirit of the Eclogues and Georgics, and Mrs. Fawcett's onslaught on Mr. Grant Allen and his "Woman Who Did." It is remorseless and extremely funny. There are, however, some grounds for Herminia being able to wait for her friend and compose her limbs after taking the poison. Death has been delayed after taking hydrocyanic acid for an hour and a quarter.[1] But Mr. Grant Allen's science is always a fine, free, careless rapture. He makes, in one of his earlier works, rattle-snakes come from India, and bacilli cultivations flourish best in the sunlight; but, then, a novelist, we suppose, may soar superior to natural law.

The New Science Review. April, 1895. London: Messrs. Gay and Bird.—This is the fourth number of the first volume of this new "miscellany of modern thought and discovery." It contains an excellent choice of philosophic subjects contributed by well-known writers and authorities. To give an idea of the range, we may allude to the admirably lucid article of Professor Crookes on the Elements, in which he summarises the present position of knowledge as to the nature of an element. What is an element, he asks, and how and where are we to draw the line? To which the only reply at present is: There are different grades in the elemental hierarchy, and different groups of the rarer elements are cited as shading off so imperceptibly into each other that no definite boundary can be found. This is followed by a very interesting posthumous paper—Autobiographical Notes—by the late Professor Richard Procter; while the remaining pages are devoted to such varied subjects as Genius, by W. G. Jordan; Where the Steamboat was Born, by Maggie Symington; The Ether and its Functions, by G. Fraser Fitzgerald, F.R.S., of Trinity College, Dublin; Changes in Spoken English, by A. B. Kingsbury; Electric Power Transmission, by Lieutenant F. Jarvis Patten; Hands as Indicative of Character, by "Cheiro"; Railroad Facts and Figures, by Melville Philips; Operation of the Vibratory Circuit, by John W. Keely; The Veil Withdrawn, compiled by Mrs. Bloomfield Moore; Are Physical and Spiritual Energy Identical? by Mrs. Mary Parmele; The Continuity of Life, by "Ormond." The contribution by Evelyn J. Hardy on Scientific Irritability is worthy of notice at the present moment, since it deals in a very fair spirit with the Muir-Dewar-Olszewski controversy on the question of priority in regard to the liquefaction of gases. Evidently Professor Dewar has a strong champion in this authoress. The unsigned article on the Unity of Life which follows is based on the work of Mr. Strindberg, "a man of literature," who "resinous product of oxygen, hydrogen, and carbon." We are by no means convinced that this is so by the arguments claims to have discovered that sulphur is a compound and a set forth; and for some time we were puzzled to know what the writer meant by alluding to the "destiny" of sulphur being 1·97. Of course it should be "density," but it is a bad slip for a scientific journal. It is clear that the review teems with subjects of the liveliest interest to the general scientific reader, and the matters dealt with are clothed in language which should be easily "understanded of the people," not to say the "dabbler."

[1] Guy's Hospital Reports, 1868, p. 259.

THE LANCET.

LONDON: SATURDAY, MAY 11, 1895.

THE paper from the pen of Professor JOHN B. MURPHY which appeared in THE LANCET of April 27th has no doubt been very widely read. It is certainly a most important contribution to the discussion of a subject which deservedly excites a widespread interest. The tables of cases therein recorded afford striking evidence of the enormous strides that the surgery of the alimentary canal has made within the past few years. We believe we are well within the fact in saying that never before has such a list of cases been recorded—cases in which the gravest difficulties have been surmounted, partly by the exhibition of care and manipulative dexterity on the part of the operators, partly by the careful observance of the necessary precautions of aseptic or antiseptic surgery, but largely by the employment of the suture button which bears Professor MURPHY's name. Intestinal anastomosis is an entirely modern procedure, but it so perfectly fulfills the indications in so many morbid conditions that it has naturally excited much interest, and many attempts have been made to perfect its technique. For, admittedly, the operation is one beset with special difficulties. The cases demanding it are often in a desperate state when coming under the surgeon's care, and a prolonged operation has often been the final drop in such patients' cups of ill. It has also been shown that the shock caused by manipulation of the intestine is altogether more severe than that induced by similar manipulation of the parietal peritoneum. The surgeon is therefore called upon to operate upon a part which is not well disposed towards operative interference, and upon patients who are themselves the worst of subjects for any operation at all. But, on the other hand, surgeons have proved by painful experience that intestinal anastomosis can only be successful when executed with the utmost nicety and precision. Many a case has been lost by the yielding of a single stitch, or by failure to secure the most exact and perfect apposition of the parts. The intestine, too, is the home of a virulent infective pyogenic organism, the bacillus coli communis, and failure to secure a perfect result only too often means certain death from infective peritonitis. This by no means covers all the practical difficulties in intestinal anastomosis: there are difficulties in diagnosis, difficulties caused by adhesions or other pathological conditions, and difficulties due to the great depth at which the manipulations have sometimes to be carried out; but those we have placed first are the two striking and essential difficulties that are met with in nearly every case alike.

The great aim of the surgeon has been to shorten the operation and at the same time to obtain perfect accuracy of apposition of the parts to be united. SENN's name will always be honourably connected with this department of surgery, for he was among the first to grasp the essential features of the problem and to introduce a mechanical appliance to meet them. He was followed by many others, who devised various modifications of his well-known decalcified bone plates—rings of catgut, bands of rubber, decalcified bone bobbins, and so forth. Then came a certain reaction against all such mechanical aids, and improved methods of direct suture—particularly MAUNSELL's—promised to yield more satisfactory results. Following this we had from America a yet more complicated mechanical contrivance—the Murphy button, and to-day it holds the field. As Professor MURPHY's paper indicates, it has now been largely tried by a great number of surgeons, especially in America and Great Britain, but also on the Continent of Europe. The consensus of opinion seems to be that it admirably fulfils the two primary requirements: it greatly shortens the operation, and by its use intestinal anastomosis can be made with great precision, and as a result the mortality of these operations has been greatly reduced. Against this most satisfactory result two facts may be mentioned as a set off. In the first place, the button is a rather complicated and very delicate piece of mechanism; it requires to be made very well, and to be used with gentleness and care. Again, the button, when set free by the separation of the rings of bowel compressed between the two portions of it, may linger for a very long time in the alimentary canal; but, so far, experience has shown that this retention of the button is not attended with danger. Too much weight must not be given to these objections to the use of the button. Simplicity of construction is to be diligently sought in all our appliances, and we doubt not that Professor MURPHY himself, or some other surgeon with a mechanical genius, will be able to devise some simple method of attaining the same mechanical result. Delicacy of mechanism is not a fatal objection, at most it is a remediable defect; and Professor MURPHY'S tables show that it is compatible with brilliant operative results. He has certainly succeeded in lifting this whole department of operative surgery—not one isolated operation merely—on to a different and better plane, and has given intestinal anastomosis a position in surgical therapeutics it has never held before. The paper by Mr. ERNEST LANE published in our columns last week, in which he recorded three cases in which he had used the Murphy button, fully supports our good opinion of this device, and he is able to add still more cases to those recorded by Professor MURPHY himself. No doubt the lists are by no means complete, and probably, as in most similar instances of a new operation or procedure, an undue proportion of successful cases have found their way into print. But this applies equally to all other methods of intestinal anastomosis, and in no way invalidates the comparison of the results of using the Murphy button with other modes of performing the operation.

One of Professor MURPHY'S "conclusions" is a very striking one, and if permanently borne out will be a most satisfactory one—namely, that the opening effected by his button does not become narrowed by the contraction of the cicatrix. This result has often followed upon the employment of other methods, and a satisfactory explanation of the different result when the button is used is

not forthcoming. In the meantime every care must be taken to test this statement, and if further experience fully bears it out it will afford another justification for the wider use of these admirable buttons.

IT may seem to some that the Budget speech of the Chancellor of the Exchequer has no interest for medical practitioners. But this is a narrow view. Any such statement has direct interest for one of those professions whose quiet and modest incomes Mr. GOSCHEN was candid enough to confess were the object of his peculiar complacency and attention when he was in the office now held by Sir WILLIAM VERNON-HARCOURT. Even Sir W. VERNON-HARCOURT, who has been so anxious to extend the system of exemption to classes which can ill afford to be directly taxed, has not framed his exemptions to give any very practical relief to the large class of medical practitioners who are hardly worked and badly paid. But apart from the point that for another year at least we are doomed to pay the heavy demand of an income tax of eight pence, the Budget statement bristles with features and facts which are full of interest to all thoughtful citizens and to the members of the medical profession. Not the least interesting part of Sir W. VERNON-HARCOURT'S performance on the Budget night was his solemn warning to all parties and to the public that the limits of taxation had been well-nigh reached. It is common enough for Chancellors of the Exchequer to preach economy, but there was an air of solemnity about the way in which the present occupant of that office used the occasion. Whatever may be the exact meaning of his mysterious remark that that was probably the last time he would be able to speak with his present responsibility on the subject, it will be remembered as a call on his successors and on politicians generally to cultivate the excellent quality of economy. The facts that the public revenue is now about double what it was fifty years ago and that in the last two years something like six millions have been added to the expenditure may well make Chancellors of the Exchequer pause and payers of the taxes tremble. We cheerfully admit that we get value received in many ways for the money in better local government, in education, in sanitation, and in a more effective protection of our empire by land and sea; but Sir W. VERNON-HARCOURT'S remark is true: "The limit of tolerable taxation has been nearly reached." We say this with only too much right. We pay taxes heavily out of incomes that are hardly earned and that are generally inadequate to support the dignity of a learned and laborious profession—and one, be it added, which takes but little from the public purse. Out of the prodigious expenditure of a hundred millions no member of our profession connected with the service of the State receives a salary that would reward a third-rate lawyer who serves his party as if it were his country. If we may not hope for the recognition and reward of labour that adds immensely to the welfare and happiness of the State, we may at any rate claim to keep statesmen to the memory of Sir W. VERNON-HARCOURT'S words, that the limits of tolerable taxation have been reached.

The essential features of the Budget are simple and not unsatisfactory. The calculations of the permanent officials of the Inland Revenue Department for the past year have reached the perfection almost of astronomical ones, and reflect high credit on that body of officials. Here it is not unfitting to say that if our public servants multiply on every hand, and in some departments receive salaries that appear large when compared with the more precarious incomes of private individuals, we are well rewarded in the character and capability of the men that guide successive generations of statesmen. The requirements of the Governments have been more than met, and a surplus of £766,000 realised and appropriated to a sinking fund. Every evidence of the substantial comfort and competence of the great body of the people was given by the Chancellor of the Exchequer, notably in the increased consumption of tea, of tobacco, and of cocoa; and in the increase of deposits in savings banks and in other ways, so that the accumulated savings of the humbler classes now amount to the enormous sum of £240,000,000. Mr. GIFFEN'S great authority was quoted by the Chancellor to show that the year 1894, when all comfortable people were more or less forced to practise economy, was the most prosperous year the working classes have ever had. A striking proof of this was given in the fact that, whereas in the prosperous year 1890 the increase in the deposits of the savings banks was less than £1,000,000, in 1894 it was £7,000,000. Another proof scarcely less striking of the well-doing of the people is found in the increased consumption of meat, which has grown from 101·4 lb. in 1887-89 to 121·8 lb. per head in 1891-93. Of course, the real improvement of the people is not determined merely by the amount of tea they consume or even of meat; but there are indications, together with the accumulating savings, of real progress, of comfort, and of thrift, which cannot but be regarded with pleasure and which mere pessimists should lay to heart. The receipts of the Treasury having been so satisfactory it would have been unnecessary to impose any new taxation but for the fact that the extra spirit and beer duties lapse in July next and if not renewed would leave for the coming year a deficit of £319,000. To meet this the Chancellor had to choose between renewing the extra duty on spirits or the extra duty on beer. He entered into no disquisition on the relative merits of these drinks or their relative dangers, as might have been expected in one so keenly alive to the evils of the drink trade, but he decided to renew the tax on beer and not to renew the spirit duties. The choice has been criticised from various points of view and was associated with some possibilities of political and party advantage to which cynical politicians did not fail to ascribe a determining influence. However this may be, the choice was a questionable one from a medical and a moral standpoint. Both liquors are sure to be drunk in sufficiently large quantities, but the favour shown to spirits by one who boasts that he is a temperance reformer is curious. The new death duties have satisfied their author's expectations, though 75,000 persons who should have contributed to them have been unkind enough to live on. Evidently, rich men will have a greater

interest than ever in consulting their medical advisers, if for no other reason than the pleasure of disappointing the Chancellor of the Exchequer.

ALTHOUGH hospitals were not unknown before the Christian era—for we read of great monastic institutions during the spread of Buddhism in India 400 years before that era and of great public hospitals and schools of medicine, science, and law established in connexion with them by merciful Buddhist emperors—there can be no doubt that the development of hospitals and the succour of the sick and injured received an enormous impetus from the introduction of Christianity and the religious and moral principles it inculcated. During the plague in France there was a great addition to hospitals, and to isolation hospitals in particular, which were placed outside the towns; but institutions for the isolation of infectious diseases—fever hospitals—are a comparatively modern creation designed to meet the needs and requirements of our most modern systems of civilisation. They have now become quite a feature in the land, and many of them have been developed with an elaboration of care and comfort that leaves little to be desired. To indicate the extent to which this system has grown and developed of late years we may point to a voluminous Blue-book of 555 pages that has just been published and laid before the House of Commons regarding the accommodation for infectious diseases provided in sanitary districts of England and Wales. This volume gives a large amount of detailed information grouped together and tabulated in the form of a huge return, showing the area and population according to the last census of every urban and rural sanitary district, and also showing, as regards every such district and every port sanitary district in England and Wales, whether the sanitary authority had made special provision for the accommodation of cases of infectious disease, together with a large number of particulars as to the size of the population; the cost of the site and hospital buildings; the number of beds; the number of cases admitted and treated during each of the five years from 1888 to 1892 inclusive; and the annual cost of maintenance, as well as the arrangements for medical attendance, ambulance systems, and methods of disinfection in use. Before long this country will be covered with a network, as it were, of these institutions, varying in size and character according to the extent and nature of the different populations to be provided for. It becomes, therefore, a matter of vast importance to the community, on the grounds of efficiency and economy, that not only public health officers but the public generally should at any rate be acquainted with the objects in view of such hospitals and the general principles of their construction and working in view of their attainment. We all want to see efficiency, but it strikes us that with a rapid increase of expenditure every year, and the diminished incomes of the classes upon whom rates and taxes already press heavily and disproportionately, the question of finance is of increasing importance, and that architectural effect must altogether give way to what is really essential and necessary. Several excellent books and articles have been published on the subject of hospitals for infectious disease, in addition to the Sanitary Act and the memoranda issued by the Local Government Board and the Metropolitan Asylums Board. But we desire now to call special attention to an article on Fever Hospitals by Mr. T. W. ALDWINCKLE and the discussion thereon published in the *Journal of British Architects* for February, 1895, in which our readers will find the question thoroughly debated and considered. Hospitals for infectious disease are divided into three kinds—viz., small isolation hospitals for villages or groups of villages, hospitals not exceeding 100 beds, and those for much larger numbers. The size, construction, cost per bed, and special features connected with numerous hospitals of this kind in this country and abroad are passed in review and illustrated by plans, and some points connected with the experience and practical results of various methods of administration and working are adverted to in their bearing upon the construction of ward blocks, ward offices, furniture and appliances, drainage, administration buildings, laundries, and numerous other matters more or less essential, or highly desirable, in institutions of this kind. The printed plans include some of the latest hospital constructions in the metropolitan area. The latest design is given of the large fever hospital projected by the Metropolitan Asylums Board, now in the course of erection—viz., the Brook Fever Hospital, Shooter's Hill—of which Mr. T. W. ALDWINCKLE is the architect. The plan seems to us very good and complete, and may be usefully consulted by those who are projecting or building hospitals of this character.

We had intended to go into the subject more fully than we have done in relation to several points of a more or less disputed or contentious character, such as the proper hygienic limits as to the size of a fever hospital, its site and distance from town, ground area, the provision or not of outside connecting corridors or covered ways, the width of wards in relation to their height, and other matters of the kind; but we find it impossible to discuss these within the limits of our present article. Our readers will, however, we feel sure, be grateful to us for directing their attention in the meantime to the paper on this subject in the above-mentioned journal.

Annotations.

"Ne quid nimis."

THE ROYAL SOCIETY.

AMONG the fifteen names selected by the Council of the Royal Society for election into the Society are those of three members of the medical profession: Dr. William Macewen, Regius Professor of Surgery of the University of Glasgow; Dr. Sidney Martin, Assistant Physician to University College Hospital; and Mr. W. H. Power of the Medical Department of the Local Government Board. We feel sure that this selection will meet with general approval, each of these gentlemen being fully worthy of the blue riband by achievements in different departments of medical science. Professor Macewen's fame as an exponent of cerebral surgery and a pioneer in that and other branches of surgical science and art is too well known to need

recapitulation. Dr. Sidney Martin holds a foremost position as an experimental pathologist and physiologist; his researches upon anthrax, diphtheria, and tuberculosis, which have considerably extended our knowledge of some of the deepest problems, have given him a position in the foremost rank of investigators. It is work of this class, strictly original and scientific, which the Royal Society does well to honour. Mr. W. H. Power has also fully earned the distinction of being admitted into the ranks of the Society. His contributions to epidemiology, undertaken during his long period of service at the Local Government Board, have been throughout marked by the scientific spirit. They are too numerous to mention in detail, but it is certain that no discussion of the etiology of such diseases as diphtheria, enteric fever, scarlet fever, or small-pox can be complete without reference to his important and exhaustive studies of epidemics of these diseases.

"HYPNOTISM" EXPOSED?

A CERTAIN well-known *prestidigitateur* whilst performing a particular piece of sleight of hand used to tell his audience that he would take them into his confidence and explain to them the *modus operandi*. "There are several ways of doing it," he would say; "some do it one way and some another, but I have no objection to telling you—strictly in confidence, mind—that I do it the other way." This in effect was exactly what Mr. Dale told a private audience who assembled in the South London Music-hall on Saturday last to witness "a complete exposure of the supposed hypnotic trancer." At the outset Mr. Dale said he was going to prove that he could do to his subjects in the waking state exactly what so-called hypnotists could do to their subjects while entranced. In response to a request that some medical men should closely watch the proceedings two gentlemen took up a position on the platform. Two subjects (male and female) were then introduced, who placed themselves upon improvised beds consisting of boards resting upon trestles and covered with some kind of drapery. A "professional hypnotist" then entranced the subjects, and their insensibility to pain was tested by thrusting a large darning-needle through the arm. They were then awakened, and Mr. Dale proceeded to thrust a needle through one of their arms, while one of the medical gentlemen did the same in the case of the other. Neither subject showed any evidence of feeling pain, and in the case of the lady there was no blood drawn, but in the case of the male subject a little blood showed itself. The "Professor" now came forward and triumphantly stated that he had proved his case—namely, that hypnotism was a sham. To this there were cries of, "You have proved nothing," and a running fire of questions and answers between the *dramatis personæ* and the audience was kept up for some time. The replies of the former were, however, very incoherent, and no direct answer could be got from either of the subjects as to whether in the first instance they were only shamming sleep or whether they were really hypnotised. The "hypnotic professor" stated that up till now he believed that the subjects were under his control, and even now to a certain extent he believed that to be the case. He expressed his surprise, however, at what he had seen. The lady stated that she was hypnotised "to a certain extent," and "to a certain extent" she knew what was passing around her, and that her hearing "was intensified." Many questions were put, but the now stereotyped answer "to an extent" or "to a certain extent" was all that could be elicited. A Mr. Marshall was now brought forward, and stated that he was one of the subjects entranced at a recent exhibition of this kind. The trance was only a sham, however. The medical men were here invited to run a needle through Marshall's lip, but they very wisely declined to have anything to do with it. Mr. Dale then thrust a needle through the lower lip of the subject, others through either ear, and six needles were hammered into the top of the skull, the subject afterwards coming among the audience and conversing with them with the needles *in situ*. We can only express our strong disapproval of the exhibition, not only because we hear it is to be continued, but because it proved absolutely nothing and the cause of science was not in any way advanced. Granting the existence of the hypnotic state, about which there can be little doubt, no proof was adduced to show that the subjects on Saturday were not still under control, although apparently possessing their own consciousness. This is, however, a theory we are not inclined to accept, although some colour is lent to it by the fact that a gentleman in the audience who wished to apply some tests in this connexion was rudely told that no one but a medical man would be allowed to touch the subjects. The most probable explanation of the phenomena is one that did not seem to suggest itself to the audience, and even if it had we do not see how it could have been proved under the existing conditions. We refer to local anæsthesia, however induced. The explanation of the subjects themselves is that they are trained to bear pain. This, however, we doubt. Had the needle been applied to other parts of the body the subjects might have told a different tale. Those who are acquainted with sleight of hand well know how easy it is in many cases to make a person do exactly what you want him to do while he is under the belief that he is doing exactly the opposite, and this struck us particularly while the arm was being offered and the needle presented for insertion. Exhibitions of insensibility to pain in the waking state are by no means new, for we remember that a year or so ago there was a performer in London who belonged or claimed to belong to the sect of the Aissoua. This man, after going through sundry incantations, stuck needles through his arms, a skewer through his tongue, and another under the skin of the abdomen without showing any signs of pain. Such exhibitions are as degrading as they are senseless, and the only possible object they can serve is to make prominent the morbid taste of the public who witness them.

ALLEGED SUICIDE BY STRYCHNIA POISONING.

IF we are correctly informed of the facts we do not hesitate to say that the proceedings at an inquest recently held in Yorkshire were very unusual. It is alleged that the wife of an innkeeper took the greater part of a "mouse powder" containing two and a half grains of strychnia. From the report furnished to us the only direct evidence on the point consisted of an admission of the deceased woman to her servant, emphasised as it was by a request that the maid should procure some linen wherewith "to lay her out, as she had taken poison." The powder is said to have been taken at 11.30 A.M. An injection of apomorphia given at 1 P.M. acted freely. At 2.30 P.M. there were no symptoms of poisoning, but shortly afterwards "characteristic spasms" were observed. The spasms gave way to morphia and chloroform inhalation at 8 P.M. The deceased was comfortable at 11 P.M. and also at 8 A.M. on the following day. Death occurred suddenly three hours and a half later. The deceased is said to have had frequent fits of heavy spirit drinking, and to have suffered at times from alarming cardiac failure. There seems little reason to doubt that strychnia was ingested, and that in a not inconsiderable measure it was accountable for the fatal issue, although the proximate cause of death was an attack of syncope, a not unlikely result of exhausting spasm in a person with the aforesaid antecedents. No medical evidence was called, although it was suggested by the jury.

Eventually a verdict was returned that deceased died from poison taken by herself while in full possession of her senses, and in consequence her body had not the customary rites of Christian burial. Although there was a high degree of probability that poison was taken, there seems to us to have been wanting that corroborative testimony which should be forthcoming to warrant a verdict of *felo de se*, and notably in the case of one addicted to alcoholic intemperance. Moreover, the deceased is said to have had some words with her husband because he remonstrated with her on the ground of her "besetting sin." If such was the fact, what is more likely than that she took the poison in an outburst of passion, her mind taking no cognisance of "right and wrong," and thus leaving her unanswerable for the act and irresponsible for the crime of wilful suicide? Although three medical men saw her during her last illness not one was called to testify (1) that poison had been taken, (2) that death resulted from poison, and (3) as to the mental condition of deceased. Fortunately, nowadays coroners' juries are lenient in their findings as regards the responsibility of suicides, holding the charitable view in the absence of strong proof to the contrary that the very act of self-effacement is in itself sufficient testimony of "temporary insanity." Such a procedure not only leaves the memory of the deceased free from the stain of an offence forbidden by God and man, but inflicts the least painful consequences on surviving relatives and friends.

THE CHITRAL EXPEDITION.

WE do not think that people in this country and India were altogether prepared for the exhibition of promptitude in mobilisation and the skill, daring, and gallantry with which the Chitral expedition has been designed and executed by our European and native forces. We are so accustomed to decry our own military systems, and to dwell upon our unpreparedness and defects and draw an unfavourable contrast between ourselves and Continental Powers in these respects, that the spirit and boldness with which the Chitral affair has been conducted have compelled our admiration, and have not been altogether unmixed with pleasurable surprise. The material composing our British and Indian armies is splendid, and the fine qualities of our soldiers have never been better exhibited than on the present occasion. The physical and topographical difficulties were immense, and the enterprising work of the sappers in constructing bridges and works of a similar kind has been very hard. The marches undertaken by the troops have been long and very arduous. The special correspondent of the *Standard* tells us that a company of the Gordon Highlanders undertook a double march of twenty-six miles over a very bad road, and did it in ten hours, arriving in excellent form and spirits, ready to fight, if necessary, at the end of it. The force that left Nowshera have been bivouacking during the whole of the campaign with 16 lb. of kit for the men and 40 lb. for the officers. "How little," the correspondent adds, "this is you only find out when you come to try to get on with it." The men, he goes on to say, have nothing but two blankets, a waterproof sheet, a pair of socks, and a shirt. They form little parties of three; with two sheets supported by sticks they make a *tent d'abri*, placing the third upon the ground to sleep upon. Officers have commonly furnished themselves with small waterproof tents, weighing about 12 lb., and with some bedding, a change of clothes, and possibly a book they find that the allowed 40 lb. of baggage are soon reached. The weather is fine and the force is wonderfully cheerful and healthy. Considering the climate at this season, the rivers, valleys, and passes that have to be crossed, the extreme diurnal variations of temperature and those of different altitudes, the fortitude and endurance of the troops with their small amount of field kit are remarkable. But the Indian forces are more or less accustomed and inured to this sort of thing, and hardships which in expeditions nearer home would be made much of are there taken as a matter of course and as incidental to campaigning in a mountainous country. The progress which has been made by the Indian Government in its military department since the last Afghan war in army reorganisation and field service is marked. It is gratifying to hear that the good work performed by the medical services has been generally recognised, and still more so that the great merits of Surgeon-Major Robertson and the conspicuous gallantry and devotion of Surgeon-Captain Whitchurch are thoroughly appreciated by all those who had the best opportunities of knowing what they have been.

A TRIBUTE TO SANITARY SCIENCE.

IT is not often that ratepayers or their representatives are willing to admit that any benefits accrue from the expenditure of money on sanitary matters. When such testimony does occur, it is well to place it on record, so that others may follow the example. At the annual meeting of the ratepayers to transact business in reference to the Wigan Burial Board it was shown by the return of the clerk to the board that the interments for 1894–95 had decreased by 236, and Mr. Councillor Ashton, in moving that the accounts be passed, is reported to have said: "He was gratified at the reduction in the number of interments, and he was sure the Sanitary Committee would feel that the money spent on sanitary matters had not been expended in vain. People grumbled at the money spent on sanitary improvements, but it spoke well for those improvements when, considering that the population was going up and they had passed through such a severe winter, there was a decrease in the number of burials."

THE COOKERY AND FOOD EXHIBITION.

THE eighth Universal Cookery and Food Exhibition, which was opened at the Portman Rooms, Baker-street, London, on Tuesday, May 7th, by Prince Edward of Saxe-Weimar, K.C.B., shows a marked improvement both in extent and quality on the previous exhibitions held under the auspices of the Universal Cookery and Food Association. As his Highness pointed out, the art of cookery is one upon which the health and comfort of the people depend, but we fear the attention which its importance merits is not accorded to the art in England. Indeed, as the Chairman, Mr. J. B. Buckmaster, said, if there is one art which has been neglected in the education of the people, especially among women, it is the proper management of the house, and this, of course, includes the proper preparation of food. He also gives it as his opinion that there is no place in the world where good food can be obtained so cheaply as in London, but this advantage is often lost for want of knowledge. In every household, whether rich or poor, the preparation of food is a necessity, and in proportion as this is done on hygienic principles will the health of the people be benefited. The object of the present exhibition, like that of its predecessors, is to spread a knowledge of the various substances used as food and to teach the best and most economical methods of preparing them for the table. Every kind of cooking, from that suited to the elementary school-girl of ten years of age to the most refined and artistic productions demanded by the epicure, is to be found among the exhibits; and practical object lessons and theoretical lectures are given each day of the week during which the exhibition remains open. Cookery for invalids and artisans is well represented, and the illustration of the new and improved system of cookery as introduced into the army should prove useful to all interested in the preparation of food on the most economical scale. In this

system prominence is given to the proper use of the stock-pot and the dripping-pan, two important processes in the preparation of cheap dishes, but the former is almost unknown amongst the poor, at any rate in England, and the latter, although represented by the frying-pan, is not at all understood. The economy of the system is easily demonstrated by the fact that three good meals per diem can be supplied for less than ninepence. To-day (Friday) the exhibition will close, and from one to three o'clock there will be a demonstration of army cooking and high-class cooking competitions, besides other attractions of a similar kind. Apart from its benevolent object in attempting to improve the domestic life of the people, the exhibition is well worthy of support, as the proceeds will be devoted to providing free dinners for poor children. On previous occasions various hospitals and benevolent institutions have benefited.

MEDICAL TESTIMONY BY A MIDWIFE.

IN another part of our present issue we draw attention to an inquest in which, in our opinion, medical evidence should have been called. On April 30th the county coroner held an inquiry at the Alexandra Hotel, Moss Side, into the cause of death of a male infant whose body was found in an ash-pit. A contemporary reports that the body was examined by a midwife, who was of opinion that the infant had not breathed after it was born; and it seems that upon this evidence the jury returned a verdict of "stillbirth," since there is no mention in the report that a medical man was consulted. We can imagine no other case where it is more necessary that the most competent opinion should be taken as to the cause of death, not only to establish the fact, but in view of a possible criminal charge, whether it be of concealment of birth or the graver offence of murder. The verdict of the coroner's jury in this case practically amounts to a bar against further inquiry, since it embodied the statement that the infant had not breathed after it was born. We trust that our information is incorrect or at least partial, for otherwise we cannot avoid the conclusion that a miscarriage of justice may have obtained.

A NOTIFICATION PROSECUTION.

ALTHOUGH dual notification is by no means a dead letter it is not at the present time carried out in the spirit contemplated by the Act. From time to time, however, instances arise which forcibly illustrate the importance of insisting on notification by the head of the family or nearest relative in cases where there is no medical man in attendance; and proceedings which have just been brought by the Aston Urban District Council against a householder for failure to notify is a good case in point. In this instance it seems doubtful if the defendant would ever have been brought to justice had not a notification been received at Aston from the medical officer of health of Brighton to the effect that a man, formerly a lodger in the defendant's house, had developed small-pox at Brighton. The defendant's wife, upon being interviewed by the deputy medical officer of health of Aston, stated that she let apartments and carried on a confectionery and milk-selling business. This woman further admitted that she had had a rash on her own body and that her daughter, aged seventeen, had had small-pox. The disease, she said, had not been notified owing to the damage which it was anticipated might thereby accrue to the business; her daughter, it appears, had been housed in an attic during her attack. This certainly seems a very gross case, and no plea of ignorance of the nature of the disease or responsibilities under the Notification Act was urged. It is indeed a matter of congratulation that in spite of the sale of confectionery and milk being continued no extension of the disease took place, and a fine of £1 and costs seems a very lenient penalty for the negligence of the defendant in failing to notify. There also appears to have been in this case serious neglect on the part of the defendant in not calling in medical assistance. The report which has reached us does not enter into all the details, but doubtless Mr. H. May, the medical officer of health of Aston will furnish a full account of it in his next annual report.

UNIVERSITY OF LONDON.

A MEETING of Convocation will be held at the University Building in Burlington-gardens, on Tuesday next, at 5 P.M., when Mr. Bompas will move that the resolutions of Jan. 22nd, which affirmed the principle of one university for London and the reconstruction of the existing University, be rescinded. The decisions of the graduates will no doubt be largely influenced by the Bill which was introduced by Lord Playfair on behalf of the Government into the House of Lords on Thursday last.

SIR JOHN SIMON AND THE GENERAL MEDICAL COUNCIL.

WE regret to have to confirm the rumours that Sir John Simon has felt bound to resign his seat as one of the Crown members of the General Medical Council. Such a step has been only too likely for some time past. For one or two sessions Sir John Simon has been able to attend only with difficulty and with considerable effort and inconvenience. No member will be more missed than he, his judgment and authority in the class of questions which come before the Council being recognised on all sides. Sir John Simon may comfort himself with the reflection that he leaves his mark on such subjects, whether affecting the education or the discipline of the profession.

AN APPEAL FOR A MEDICAL MISSIONARY.

THE Archbishop of Canterbury's mission to the Assyrian Christians is in sore need of a medical missionary. The headquarters of the mission are at Urmi in Persia, but there is also a station at Qudshanis, in the Kurdistan Mountains in Turkey. Any medical man willing to accept the post should be unmarried, for the life is somewhat rough. He will have expenses for his journey's outfit paid and will receive £25 a year. Board and lodging are provided free. In addition to this the Guild of St. Luke offers £100 a year. The practice would comprise ordinary medicine and surgery, a good deal of eye work, and sundry local fevers, together with occasional military surgery from chance encounters with Kurds. The climate is pleasant and healthy, horses are cheap, and food is good.

THE REGISTRATION OF MILKMEN.

THE control of the milk traffic is a subject which is daily receiving more and more attention at the hands of the public, and the recent report of the Royal Commission on Tuberculosis, more especially that part of it referring to circumstances determining danger from milk, will, we imagine, tend materially to the more rigid inspection of milch cows, to consideration of the conditions under which these animals are housed, and to the withdrawal from dairies of any cows with diseased udders. It will too, we trust, lead to a better observance of the Dairies, Cowsheds, and Milkshops Order, and to a more general adoption of the Infectious Disease Prevention Act in the provinces. As far as the metropolis itself is concerned, we note in the above connexion that the Metropolitan Dairymen's Society has submitted a proposal for the consideration of the London County Council that "it be provided that every person who vends milk in the streets or delivers the same at any house shall be required to wear a

metal badge denoting the licensed dairy from which the milk is supplied, and that all cans and receptacles used for the purpose of the trade for the conveyance or sale of skim or separated milk shall be clearly labeled to this effect with inch letters in brass on the can or receptacle, or on a canvas label attached thereto." It would certainly seem that some such identification as is here indicated would have the effect of enabling milk purchased in the street to be traced with greater facility than at present—that is to say, if the milk purchasers would take the trouble to observe the badge; and it might also afford to the public a better means of obtaining that for which they ask and pay.

THE OPIUM COMMISSION.

SIR JOSEPH PEASE is evidently not satisfied with the results which have been arrived at by the Royal Commission and which are published in their report regarding the opium traffic, for he is about to move a resolution in the House of Commons on the subject on the 24th inst. He regards the system—and hopes, of course, to carry the House with him—by which the Indian opium revenue is raised as morally indefensible, and urges that the Indian Government should cease to grant licences for the cultivation of the poppy and sale of opium except for strictly medical purposes, and that the Government should prevent the transit of Malwa opium through British territory. Our readers will find in the *Times* of the 7th inst. an article on Indian Affairs which is mainly devoted to the subject of opium and the results of the late investigation by the Royal Commission. Reference is made to the able communications which appeared in that journal in 1881-82 from Sir George Birdwood on the physiological aspect of the question and the ascertained effects of opium as used in India on the brain, the body generally, on moral character, and also on crime returns. The results were based upon the intelligent observation and experience of an impartially-minded authority; and the Royal Commission, after examining 700 witnesses and thoroughly considering the matter, has confirmed Sir George Birdwood's observations. The weight of evidence—that of medical men, missionaries, natives of India, and officials—was such as to have caried conviction to the minds of the Commissioners, as it has probably to those of most unbiased people. We shall, nevertheless, await the course and result of the discussion of Sir Joseph Pease's resolution with some interest and curiosity, if only to see what fresh evidence the anti-opium party can adduce.

THE ABERNETHIAN SOCIETY.

THE centenary of this society was celebrated by a conversazione in the Great Hall and Medical School of St. Bartholomew's Hospital on the evening of May 1st, and was attended by a large number of members of the staff, lecturers, and past and present students. There were also present some well-known members of the staffs of other hospitals. The Presidents, Dr. Maidlow and Mr. E. W. Cross, received the visitors in the Great Hall, in which there was an exhibition of letters, instruments, and other objects of interest in connexion with Mr. Abernethy lent for the occasion by Mr. Alfred Willett, Dr. A. Davis, Mr. Jeaffreson, and others. In this hall there was also an exhibition of New Zealand weapons &c. lent by Mr. James Berry and Mr. J. S. Mackintosh. At 9 P.M. Dr. Norman Moore gave a lecture on the History of the Abernethian Society, and at 10 P.M. Dr. Kanthack gave a lantern demonstration of Photo-micrographs of Bacteria. Drs. Edkins, Bowman, Klein, Fletcher, and Jones, and others exhibited microscopical sections and other objects of interest in the lecture theatres and laboratories, and there were surgical instruments by various makers on view in the anatomical demonstration room, where microscopes and ambulance appliances were also shown. Dr. Lewis Jones showed a series of vacuum tube experiments to illustrate the phosphorescence of many bodies under the action of the electric spark, and also an apparatus giving high-frequency discharges at high potentials to show the striking effects first brought forward by Tesla and by d'Arsonval, such as the illumination of vacuum tubes without electrodes, and the glowing of bulbs held in the experimenter's hand or in proximity to the apparatus. Visitors also had the opportunity of testing for themselves the small physiological effect of the discharges of the high-frequency coil by closing the circuit through their arms, and of seeing the remarkable experiment of an incandescent lamp glowing brightly between the hands of two persons whose bodies conveyed the current supplying the lamp without feeling any painful effects. The members of the St. Bartholomew's Hospital Musical Society sang glees in the Library, and were followed by the members of the Dramatic Club of the hospital, who played the farce "A Regular Fix." The committee are to be congratulated on the results of their efforts to make this centenary a success.

THE USE OF ALCOHOL IN HOSPITALS.

DR. GAIRDNER'S influence in the abatement of indiscreet alcoholic stimulation in disease is well known, dating from his classical paper published in THE LANCET of March 12th, 1864, to which—as we remember with pleasure—we endeavoured to do sympathetic justice in THE LANCET of March 28th of the same year. Dr. Gairdner's article referred chiefly to the use of alcohol in typhus fever, of which he had quite an exceptional experience in the Glasgow Fever Hospital. Dr. Gairdner evidently is still interested in this great question. The *Glasgow Herald* of May 7th contains a letter from him commenting on a leading article in that journal of the preceding day on the consumption of alcohol in workhouses, which was based on a recent report to the Home Office. The interest of Dr. Gairdner's letter lies in its reference to the medical use of alcohol in a general infirmary of the first class—the Western Infirmary of Glasgow, of which Dr. Gairdner is one of the physicians. Doubt and disappointment are sometimes expressed by those who have the means of seeing much of the drunkenness of Scotland. But whatever the case as to the social and personal use of alcohol the following figures show that in the treatment of grave general disease, as seen in the Western Infirmary, its use is very limited indeed. The infirmary contains 400 beds. The following facts as to last year's bill for alcohol have been supplied to Dr. Gairdner by the superintendent: Port wine, £12; claret, 18*s.* 6*d.*; champagne, £8 9*s.* 0*d.*; brandy, £38 12*s.* 0*d.*; whisky, £61 4*s.* 0*d.*; gin, £1 14*s.* 0*d.*; malt liquors, £14 16*s.* 0*d.*: total, £137 13*s.* 6*d.* We need scarcely say that there is no interference—as these facts show—with the full discretion of the medical staff in the use of this medicine, any more than in the use of others. There can be little doubt that in all hospitals great care in the use of alcohol is shown. Dr. Gairdner's letter and facts will tend to confirm this.

IS AN ARMY SURGEON A MILITARY OFFICER?

MOST people probably would say that such a question was superfluous—that a gentleman holding Her Majesty's commission in the army must necessarily be a military officer; but apparently His Royal Highness the Commander-in-Chief is of another mind in the matter. When returning thanks for the Army at the Royal Academy banquet the Duke of Cambridge is reported to have said: "Your President has told us the men of the army are made of the same stuff as their predecessors. In proof of this I have only to refer to the gallant conduct of those distinguished officers Sir Robert Low and Colonel Kelly, and of that brave civilian Dr. Robertson.

(Cheers.)" Had this invidious distinction proceeded from almost any other quarter we should willingly have passed it by unnoticed; but coming from the source it does we can only enter a protest as warm as our respect for the well-nigh life-long services of the Commander-in-Chief will admit. Surgeon-Major Robertson is no more a civilian than are General Low and Colonel Kelly, or for that matter the Commander-in-Chief himself. We should have thought that the occasion afforded a singularly fitting opportunity for the utterance of a few well-chosen encomiums by the chief officer in the British army; but such well-deserved encouragement is too often conspicuous by its absence from any speech of His Royal Highness when the good services of military surgeons are in question. We are perfectly well aware that Surgeon-Major Robertson was employed at Chitral in a so-called civil capacity—we have yet to learn that his position deprived him of his rank as a military officer.

DIPHTHERIA IN LONDON.

FATAL diphtheria in London still maintains itself at what seems likely to be a normal height, the deaths registered in the last two weeks being respectively 27 (2 below the corrected average for the preceding ten similar weeks) and 29 (corresponding to that average). During the four weeks of three successive months the deaths have been: in February, 121; in March, 116; and in April, 107; a continuous improvement it is true, but not of any striking character. The notifications in the four weeks ended April 27th were 562 in the whole metropolis, only reaching and exceeding 10 in two sanitary areas, the case mortality being just a fraction under 20 per cent.; while in the succeeding fortnight the 300 notifications and 56 deaths yield a per case mortality of just below 19 per cent. Thus, diphtheria would not appear to be decreasing in actual amount, even if it be not quite so fatal. Of the 300 notified attacks mentioned, only 149 were removed to hospital; and the numbers of patients remaining under isolation have in the last four weeks been respectively 435, 441, 432, and last Saturday 457. Of the 56 deaths in the last fortnight, 41 were in children aged between one and five years. In this same period there were 23 deaths registered in Greater London, including 9 in West Ham and 4 in Edmonton districts.

THE TREATMENT OF PUBLIC DRUNKENNESS.

THE drunk and incapable are at all times more or less indebted to the attentions of the police, but for whose timely help fate would sometimes deal hardly with the semiconscious toper. In the modes of its expression, however, this care is liable to somewhat striking variations. Among ourselves there is apt to be too little regard for ceremony or even for necessary precaution. Elsewhere the error in judgment pursues an opposite course. A contemporary reminds us of the Danish method. This appears to be regulated by the principle of like to like, and accordingly treats the drunken in an almost indulgent manner and the sober with some rigour. The inebriate journeys in a cab to the police station, is there detained, and again driven home when free from the effects of drink. Cabman, constable, and surgeon have all in the meantime to exert themselves for the poor sot, and the bill of their united charges is presented to the publican whom he last visited. It is easy to see that errors and fallacies may readily arise out of this system, in which method surely is overdone, and the penalties of indulgence are exceeded by the labours of commiseration. A simpler plan should serve all useful purposes. The necessary points of procedure in such cases, we consider, should consist of a preliminary examination on the spot by the constable on duty, who must have some knowledge of ambulance work, this primary survey to be supplemented in cases of doubt or difficulty by a regular examination by the police-surgeon. Particular care should be taken to prevent avoidable exposure in the police cell, and in this direction there is still room for improvement. The charge made upon the publican, though no doubt liable more or less to misapplication, is not necessarily an unjust one. Two persons must concur in the offence of drunkenness; one who commits it and suffers by it and yet makes no amends, and another who aids and abets and is enriched by him. Both parties in our opinion owe some compensation to social decency.

NATIONAL SCHOOL CLOAK-ROOMS AS INCUBATION CHAMBERS.

A NEW YORK medical man has, it appears, been expressing his opinion that the outer clothing of public school children is one of the most active sources of the spread of infectious disease, and although his remarks apply in the first instance to America they are not without application to our own country. It is pointed out that the hanging up of wet and dry clothing, some of which may have come from infected houses, in juxtaposition in ill-ventilated and crowded cloak-rooms is a proceeding which lends itself to the growth and multiplication of micro-organisms. We are told that in America the clothing is sometimes hung in the school-room itself, and that the "wardrobe-room," where the outer clothing is usually deposited, is at times utilised as an extra recitation-room. The suggestion is made that the cloak-room should be thoroughly ventilated—and, we would add, well lighted—and that arrangements should be made for drying the children's clothes in wet weather. Without entirely subscribing to the sentiments above expressed, it must be admitted that considerable improvement might be made in our own country in the matter of cloak-room accommodation, and that, as far as possible, the clothing of each child should be free from immediate contact with that of others. The amount of outer clothing which the children of the poorer classes wear is frequently somewhat astonishing to persons differently brought up, and although the lengthy exposure, often in very inclement weather, which school attendance necessitates renders the careful clothing of children a subject of paramount importance, nevertheless it would seem to us that this object might often be attained with equal economy by fewer and better selected garments.

THE BELPER GUARDIANS AND ISOLATION.

AN interesting instance of the want of method and accommodation for dealing with infectious disease which still obtains in some districts has lately been witnessed in the Belper Union of Derbyshire. A case of small-pox occurred in the Alfreton urban sanitary district, which is situated in the union in question, and the patient, being attended by the district medical officer, was sent by him to the workhouse infirmary and conveyed there in an open cart by the sanitary inspector to the Alfreton Urban Council. On arrival the patient was isolated in the tramp wards, which were, it appears, converted into a temporary small-pox hospital. The Belper guardians are in a state of real indignation at a patient being brought from "one sanitary district to another," and they have passed a resolution that "the master have most imperative orders not to admit into the workhouse any person suffering from any dangerous or infectious disease ..... and that notice be sent to the clerk of each urban district council in the union." The clerk to the guardians refused to express an opinion as to the legal aspect of the position when asked whether they had a right to refuse admission to those people whom one of their officers sent in as destitute; nor was he able to enlighten the

guardians when a proposal was made to prosecute the persons responsible for moving the small-pox patient to the infirmary—he was unable to state against whom proceedings should be taken or whether such proceedings devolved upon the guardians or the rural district council. If this case is really going into the law courts we shall watch it with the keenest interest; but in the meantime it would be well, it seems to us, if both the Belper guardians and the rural district council were to take steps to provide themselves with proper isolation and ambulance accommodation, and to a large extent the same remarks are applicable, as far as we can judge, to the Alfreton Urban District Council and to other urban district councils in the same union. These exhibitions of unpreparedness are far from edifying, and the sooner the authorities concerned appreciate and act up to their responsibilities the better. We imagine that the Local Government Board will have something to say to the conversion of the tramp wards into a small-pox hospital.

THE REGISTRATION OF MIDWIVES.

A LETTER advocating this measure, and signed "Honnor Morton," appears in the *Daily News*, protesting that the Bill is in no sense intended to create a new class of practitioners. Whatever is done in this matter should be done conformably with the principle that a lying-in woman is peculiarly a subject for medical care, and that any midwife attending her does so in a limited and subordinate sense.

THE DIFFUSION OF SMALL-POX.

SMALL-POX has not been quite so quiescent in London in the past two weeks as in recent weeks prior thereto, the notifications last week being 11 in number, with 14 in the previous week, these totalling to 25, against only 35 in the whole metropolis in the four preceding weeks. In no district of London in the period last named did the cases exceed 6, and reaching this number only in Holborn and Lambeth. St. Marylebone had but two notified attacks. Of the 25 notifications in the last fortnight, 20 have resulted in removal to hospital, where on Saturday last there remained 34 patients under treatment, as compared with 53 a month earlier. Only one death from small-pox has been registered in London during the last seven weeks, this occurring last week in a vaccinated person aged under twenty years and belonging to the Rotherhithe sanitary area. Near at hand Bedford has had renewed experience of small-pox in the past month, but only to the extent of three or four attacks. Birmingham happily has been entirely free for some weeks. A few cases are reported to have occurred in Nottingham, and ten attacks have been chronicled in Liverpool during April. Other towns of Lancashire from which reports have come of the appearance of small-pox are Manchester (with four cases in the last three weeks after the total disappearance of the disease for more than a quarter of a year), Bolton, and St. Helens. In Yorkshire there has been some anxiety caused at Mexborough owing to a small outbreak of the disease, four or five cases being under isolation in the hospital, such as it is, belonging to the urban district, the first to be attacked being a tramp who, with his wife and family, was found in a common lodging-house, and removed to the isolation ward. His wife and children have also been removed, and steps have been taken with a view to watching the inmates of the lodging-house who were in close association with the sufferer prior to the diagnosis of his malady. Another case is said to have come into the town from a lodging-house at Wath-upon-Dearne. In Dublin the small-pox epidemic still continues, though to a much slighter degree than in past months. Thus in the last three weeks of April the admissions to hospital were only 42 in all, the discharges nearly as many, namely 40, and the patients remaining under treatment, including acute cases and convalescents, respectively 107, 106, and 95. Of the 4 deaths registered in the period 3 were those of vaccinated adults over twenty years of age, and 1 that of an unvaccinated individual aged over forty years.

THE HEALTH OF PROFESSOR HUXLEY.

WE have great pleasure in stating that Professor Huxley has made steady progress during the past week. His temperature has remained normal, and he is taking nourishment well. He is able to be out of bed for a short time every day now, and altogether the outlook is much more hopeful.

MEDICAL MISSIONS.

AS we have elsewhere pointed out hospitals were not unknown before the Christian era, and our present hospital system owes its origin to monastic ideas; but religion and medicine have not always gone hand-in-hand, although for the better development of both it is well that such should be the case. Within quite recent years the religious bodies have taken fresh interest in medicine as an aid to the propagation of the Gospel, and the cry for more medical missionaries was the keynote struck at the annual meeting of the Medical Missionary Association held last week at Exeter Hall. The society was founded in 1878 to extend information, to deepen interest, and to give a more continuous impetus in England to the medical mission movement. Its methods are quite undenominational, and it does not confine its work to foreign countries alone, but seeks to establish medical missions among the poorer population at home. During the past year a net gain of seventeen has been made to the number of medical missionaries, raising the number of those holding British qualifications to 202. We fully sympathise with the objects of the association, and as long as nothing is done to lower the dignity of the profession we wish it every success. But such an incident as that related by one of the speakers at the meeting—in which two coolies and a cook, after watching the methods of the missionary for a few weeks, set up a rival establishment for the cure of opium cases—is only too likely to bring the profession into ridicule; and although circumstances soon dissolved the partnership and broke up the establishment a little care might perhaps have prevented such a thing from happening.

THE LATE PROFESSOR CARL VOGT.

THE death of Carl Vogt (to whom further reference is made in our obituary column) has deprived Switzerland of one of her most illustrious children and science of one of her most devoted and laborious followers. Vogt was a naturalist in the same sense as Linnæus, a geologist as much as a zoologist, an intelligent traveller as much as a physiologist. He was a teacher not only of professorial classes, but of a wide circle of intelligent lovers of nature. In losing him we lose almost the last of the giants whose labours have resulted in the present condition of zoological knowledge. Vogt's first work of importance was his account of the Embryology of the Salmon, which he contributed to Louis Agassiz's "History of the Freshwater Fishes of Central Europe"; this was rapidly followed by his account of the midwife toad (Alytes obstetricans). Like Kölliker and van Beneden the elder, Vogt fell into the error of supposing that developmental history might by itself form the basis of a systematic arrangement of the animal kingdom; but, on the other hand, his division of "worms" into flat, round, and ringed worms is still in its essence accepted. Vogt was one of the first to recognise the annulate affinities of the leeches. He was one of the

pioneers in our knowledge of that curious modification of one of the arms of the male cuttlefishes and squids (Cephalopoda) which is known as hectocotylisation, while his contributions to vertebrate morphology were considerable. But although Vogt wrote in conjunction with E. Yung a widely used text-book of Zoology, he never lost his interest in the geology of the Alps or the early history of mankind; the modern science of microscopical petrography was another subject in which he took a deep practical interest. Of Vogt, as of Casaubon, we may say:

"O doctiorum quicquid est
Assurgite huic tam colendo nomini."

MR. F. HAYDON, L.R.C.P. Lond., assistant surgeon to the West London Ophthalmic Hospital and honorary secretary, has been elected Secretary to the Court of Examiners of the Society of Apothecaries, in the place of Dr. C. E. A. Semple, deceased.

WE are asked to state that the festival dinner of the Royal Medical Benevolent College will be held on May 15th in the East Foyer Dining-room of the Imperial Institute, instead of at the Queen's Hall.

THE LANCET
Special Sanitary Commission
ON
THE VENTILATION OF HOSPITALS AND THE TREATMENT OF INFECTED AIR.

IN no other buildings is it more essential or vital that ventilation should be efficient and conducive to comfort and to health than in those set apart for the tending and nursing of the sick. Most of our large hospitals were founded at a time when methods of ventilation and sanitation were crude, but even in hospitals of comparatively modern construction, in which the sanitary arrangements may be perfect so far as regards the removal of effete liquid and solid products, there will generally be found much that can be done to improve the satisfactory displacement of vitiated air and the means of providing a fresh and pure supply. The importance of such a provision is doubly emphasised when we consider, as experience has shown, how beneficially the free and open atmosphere ministers to the healing of wounds and to the elimination of morbid conditions. No apology is needed, therefore, if we lay before our readers the details of so important a departure in regard to the construction of one of our large provincial hospitals as the installation of a new method of ventilation which, we venture to think, is far in advance of any scheme which has hitherto come under our observation, and more particularly because not only does it provide for the efficient and salutary ventilation of hospitals, but also for the treatment, if need be (by means of antiseptics), or purification of the vitiated air of the wards before it passes into the outer atmosphere. For the present, however, we will confine ourselves to the method from the point of view of ventilation only, and in a succeeding section we will describe how this system may, by the simplest, and, we think, most effective, manner be employed for the treatment of vitiated air with the important view of preventing the spread of infection from such buildings as small-pox and scarlet fever hospitals. For this purpose we cannot do better than take as an illustration the New General Hospital now in course of erection in Birmingham, which, by the courtesy of the architect, Mr. Wm. Henman, we have recently had an opportunity of inspecting. Let it be understood that in doing so we are not dealing with a system that has merely been projected, but with one that has already been carried into practice in several infirmaries and other buildings, schools, police courts, and the like, and which, as we have just said, has actually been provided for in the plans of one of our great hospitals. The building operations, indeed, at the New General Hospital, Birmingham, are so far advanced as to afford a clear idea and plan of the installation which is to effect the ventilation of the hospital.

It will be well first to review briefly the systems of ventilation which are at our disposal. These are: (1) ventilation by aided means—so-called artificial ventilation, (*a*) extraction, (*b*) propulsion, (*c*) agitation; and (2) ventilation without these means—so-called natural ventilation. It should be observed that the expressions "artificial" and "natural" when applied to ventilation must only be regarded as convenient merely in distinguishing between induced and unaided ventilation. If we define ventilation as consisting in the supply of fresh pure air suitably tempered and humidified, and continuously introduced so as to prevent stagnation in any given space which has become vitiated or is liable to vitiation, in such a manner as to give the greatest comfort to those individuals who may be present, then obviously it is absurd to qualify it by either term. Ventilation is ventilation whatever may be the means employed. The *means* of attaining the end may, however, be correctly described as artificial or natural as the case may be. "Natural ventilation," which simply means the opening of windows and letting the air move about at will (it may be by propulsion or extraction, or the air may be quite stagnant, in which case little or no ventilation is effected), is obviously unsuited for a hospital, since it cannot be placed under control in regard to temperature and purity, especially in such a variable climate as ours, and in our towns where we have often to contend with a smoke-laden and otherwise impure atmosphere. We may pass, then, to the various means of inducing ventilation. Of these we may dismiss the agitation or punkah principle, which at its best simply stirs and mixes the air, but does absolutely nothing beyond making it of uniform impurity. This reduces us to the question as to which of the two systems—extraction or propulsion, based respectively on the vacuum and plenum principle—is the better adapted, more particularly for the ventilation of hospitals and similar buildings. After a very careful consideration of both systems we are led to the conclusion that the propulsion system offers very distinct and important advantages over the extraction system, which we shall shortly point out, and which in kind are of especial importance where the ventilation of places in which the treatment of the sick and diseased is concerned. This conclusion is forced upon us because, as we shall presently show, complete control may be had over the propulsion system, while the extraction process introduces some objectionable features which cannot apply to the former, and which would be difficult if not impossible to avoid. In the extraction process, for example, it is true that air is constantly being extracted and replaced by other air, but the source of this incoming air is unknown, since it may be drawn in from any possible crevice. Special inlets, however, may of course be provided, but then comes the difficulty of regulating the temperature and the purity of this incoming air—a matter of the utmost importance where the atmosphere is liable to the pollutions of a town and the effects of ever-varying climatic conditions. On the other hand the propulsion system is under complete control, the site from which the air is taken may be selected, the impurities of environment may therefore be prevented, the air can be purified, humidified, and warmed, while extraneous and it may be dangerous sources of ingress are completely avoided, the supplied air tending to leak *outwards* through any unseen or accidental crevice through which otherwise impure air may gain an entrance. Having thus pointed out broadly the advantages of the propulsion system, we may next describe it in detail, selecting as one illustrative method of its application the installation at the New General Hospital, Birmingham, while incidentally we may mention one or two examples of its application elsewhere.

At the outset it should be stated that the method of ventilation about to be described is primarily due to Mr. William Key, an engineer of Glasgow. In applying the Key scheme to a hospital, a selection is first made of a position, uncontaminated by surroundings (or of more than one such position if the buildings are extensive), where air can be drawn in towards an extended screen, kept moistened with water

and periodically flushed to free it from the large amount of dirt which it intercepts. The screen is formed of a series of cocoanut fibre cords stretched vertically and interlaced with copper wire to keep them in position. On the outer side a coil of steam or hot-water pipes is placed to prevent freezing in the winter, and on the inside are other heating coils, arranged so that by means of doors or louvres the air passing through or under them may be regulated. It is then forced onward by means of a rotary fan or air-propellor, set in motion by steam, water, gas, or other power—preferably an electric motor—and finds its way to the several rooms, wards, or corridors by means of a wide and lofty horizontal duct and up flues, all calculated to the required areas, at the base of which are more heating coils, together with a simple contrivance by which both the volume and temperature of the air supply to any separate part of the buildings can be adjusted to a nicety.

The air enters where required by means of trumpet-mouthed openings, at about two-thirds the height of the storey, so as to disperse evenly throughout the apartment; and at the same time it expels an equal amount of air, principally through openings provided on the same side of the room as the inlets, up flues of the proper sectional area, into ducts in the roof and thence to the open, through valved and louvred turrets or flaps, four-sided, so that outer movement of the atmosphere shall exert no adverse influence upon the outflow.

These outlet air valves are so constructed as to place the air within the building under a slight pressure of about four ounces per square foot in excess of the outside atmospheric pressure at the time. In the New General Hospital at Birmingham an installation has been provided for heating and ventilating the buildings, the cubical capacity of which equals about two million feet; so that, as the air may be changed ten times per hour without opening any windows, twenty million feet of air every hour has to be propelled, cleansed, and warmed; for which purpose there will be eight "fans," from 6 to 8 feet diameter, to be turned by electric motors, 2000 superficial feet of cleansing screen, and about 35,000 feet of steam tubing.

A word in regard to the screens, which form a very important feature in Mr. Key's method. As has already been partly indicated, this apparatus, which is designed for the filtration and washing of the air, consists of several thousand cords of suitable material, stretched from a beam near the ceiling to another near the floor of the air chamber. When finished, the screen has the appearance of coarse cloth stretched across the apartment. The cords are placed so closely that they touch each other, copper wires are laced through the vertical cords in horizontal rows, and, being drawn tight, give the screen a flat surface; the rough fibrous nature of the material breaks up the entering air into very minute streams, which pass through equally all over its surface. These screens may be formed double, in order to give an extra cleansing or scrubbing surface when so desired. The screen is kept moist by water trickling down each cord, and at regular intervals of more or less frequency an automatic flushing tank discharges a considerable volume of water down the screen, to remove loose matter which may have collected, and to thoroughly wet the whole surface. Its purifying effect upon the air is remarkable. It prevents, for instance, the entrance of fog into the wards, the clearness of the atmosphere within, in spite of a dense fog without, making it almost difficult to believe that the incoming air is not derived from any other source than that prevailing under the objectionable conditions outside. There is no doubt, in view of this result, that the greater part, if not all, of the dust particles of the air are also removed. The attraction which moistened surfaces possess for suspended particles is well known, and it is just this principle, in fact, which underlies the successful working of a Pasteur filter in removing micro-organisms from water. When fog is being dealt with it is curious that the air within appears brighter and clearer even than when there is no fog outside, so that doubtless the condensed particles of fog effect the deposition of much suspended matter usually present in the air. When the fog is very dense drops of water from the screen are in colour like drops of black ink, so that the removal of objectionable suspended impurities, which, if left to ventilation by natural means or to many methods of ventilation by extraction would pass into the wards untrapped, is not the least important function of the screen. In the same way it is exceedingly probable that micro-organisms would be arrested mainly by deposition upon dust or moist particles, and a large reduction of their number effected.

It was the important purifying property of the screen just alluded to which led Mr. Wm. Henman to suggest that the outgoing air, after being vitiated or infected by patients, might again be purified, so far as regards infection by the use of similar screens at the outlets. This project is so important in connexion with the construction and site of infectious diseases hospitals as to merit very serious consideration and attention at the hands of the profession and others who are interested in the subject. Mr. Henman considers that in fever hospitals each block of buildings should be separately supplied with an air intake, screen, heating coils, and fan, which in a building of only one storey may be arranged in the roof space.

Mr. Henman takes no credit for the method by which a suitable supply of air is cleansed, tempered, humidified, and propelled into the buildings, but acknowledges his indebtedness to Mr. Key for the assistance he has rendered in working out his ideas in connexion with the methods he adopts. It is simply proposed that air, so cleansed, tempered, and humidified, should be propelled through narrow, wedge-shaped openings in the ceilings, and, by means of a simple form of spreader, evenly distributed throughout the wards and corridors.

The feature which Mr. Henman claims to be a novelty is the placing of a screen (somewhat similar to those employed by Mr. Key at the air intake) at the *head of every bed*, and keeping the same charged with a disinfecting fluid. An outlet flue will be provided at the back of each screen, so that as fresh air is constantly being propelled into the ward an equal quantity will be forced through the screens, all other outlets being stopped, consequently almost immediately the air becomes contaminated it will again be purified *even before it actually leaves the apartment*, and thus purified will pass up the flues and into the open air. A very simple contrivance is employed for keeping the screens constantly charged with disinfecting fluid, so as to obviate disturbance to the patients in the wards, and reduce personal attention to the least possible limits. The disinfecting fluid found to be perfectly effective in destroying disease germs is a weak solution of carbolic acid. Above and below each screen a shallow trough is placed, the upper and lower ones respectively being united by lead piping, carried to any convenient position outside the wards, each connected to a cistern of moderate dimensions to which a small pump is attached, so that as the fluid flows along the upper pipe and trickles down the screens the surplus is caught in the lower troughs and returns through the other pipe to the lower cistern, whence it is pumped to the upper one. This may be made practically automatic by applying to the pump the same motive power used for turning the fan which propels fresh air into the building, and by having a third cistern or reservoir with regulated supply to make up for loss of fluid by evaporation from the screens. There can be little doubt of the efficacy of the screens in removing micro-organisms in view of the indications afforded by a series of very searching and exhaustive experiments carried out under the direction of Dr. Sims Woodhead and Dr. Cartwright. The results of this investigation may be summoned up as follows:—

1. Micro-organisms are entrapped by passing air through moistened screens.

2. The apparatus employed in the experiments in which dust loaded with organisms was forced through an experimental screen into a wooden chamber from which samples of the air were taken from time to time for bacteriological analysis gave in all probability less perfect results than would occur in practice, because in these experiments the air, highly charged with micro-organisms, was both forced directly through the screens and also by force drawn through them, whereas in buildings the air would be propelled gently through the screens simply by the slight pressure of the incoming air, no suctional force whatever being employed.

3. The very marked diminution in the number of micro-organisms which passed through the screens when supported by means of perforated zinc, and the smaller number still which pass through a thin layer of cotton wool, indicate varying powers of filtration and point to the possibility of devising a screen which will practically free the air from germs and yet not unduly retard the expulsion of the air from the building.

4. In proportion to the closeness of texture of the screen material, the size of the screens must be increased so that the

air may pass through them with the least possible force being required to expel it.

5. The moistened screens are all that is required to *arrest* the germs, but carbolic acid should be added for *destroying* them.

6. Disease germs or fungi likely to be conveyed by the atmosphere are usually found attached to comparatively large floating particles, as the scales of the epidermis, or fluffy shreds of material which would be entrapped by the screens in greater proportion than the germs experimented with.

In accordance with the suggestion contained in paragraph 3 that better results might be expected by the use of finer screens yet of ample size to permit of the passage of air, a building has been erected in which these suggestions can be adopted, and tests will shortly be made exactly on the same lines as when the screens are employed for the purification of air emitted from hospitals. It is probable, again, that the passage of large volumes of warm air through the screens would volatilise a considerable quantity of the disinfecting fluid with which the screens will be constantly charged, and that any germs which might not be entrapped by the screens would thereby be quickly deprived of vitality, and, moreover, that the mere reduction of the number of germs would be a considerable safeguard, because the attenuation of germs, as is well known, lessens the severity of their effects.

As regards the cost of the method proposed, the necessary apparatus is stated to be quite inexpensive and easily applied, and Mr. Henman is prepared to show that buildings can be erected and equipped at considerably less cost than is now expended upon hospitals relying only upon the ordinary means for ventilation, without any appliance for purifying the air emitted. More *space* for the patients has been the demand for some time, which, beyond a given area known to be necessary for nursing purposes, in reality means more *air*. It is very naturally asked, where, with such a constant change of air, is the necessity for more space within the hospital than is required for tending the patients? It is contended that with suitable appliances by which the air can be constantly and quickly changed, as in Mr. Key's method of ventilation, buildings might be less in cubical capacity by at least one-third; and not only would this reduction in size more than compensate for the cost of apparatus and its working, but the daily labour and charges for heating, lighting, cleaning, administration, and maintenance would be proportionately less. Another point of importance is that those who tend the patients would be constantly in a pure atmosphere, for no sooner is the air vitiated by contact with the patients than it is at once purified and expelled.

To conclude and to recapitulate, the system of propulsion as just described seems to us to offer very distinct advantages which cannot possibly be claimed for other systems. In the first place, the source of the air-supply is known; then the air is not only cleansed of ordinary dust and dirt, but also freed from flies,[1] moths, and other insect life, in addition to which carefully conducted scientific experiments have proved that micro-organisms are entrapped by the moistened screens. Again, another important function of the screens is to maintain the air-supply in a proper state of humidity, for, odd as it may seem, they moisten the air when too dry, and dry it when it is over-saturated with moisture. Further, any suitable temperature can be maintained for an indefinite time in any apartment, and for each it can be regulated, and that without any open fires, with their attendant dirt, labour, and noise, in keeping up and in conveying coal about the buildings, and without a single steam or hot-water pipe in any habitable part of the same. Complete change of the air throughout the buildings up to ten, twelve, or even more times an hour without draughts, can be effected, and general cleanliness about the buildings be ensured, all incoming air being relieved of its impurities, and all repairs to apparatus executed without the necessity of even entering any habitable parts. The absence of draughts is perhaps the most pleasing, as it is one of the most satisfactory features of Mr. Key's method. This is all the more remarkable when we consider how rapidly the air is being changed. Lastly, by carefully regulating the positions and areas of the incoming and outgoing flues respectively, each department has its air changed without reference to any other part of the building. We have seen the system in working order at the Aston Police-courts. The stuffy, stale, and unpleasant character of the air of such places during the hearing of cases is only too familiar, but since this method has been in operation the air of the courts has been entirely free from any reproach on each and all of these heads. As to cost, that is a question, of course, which the committee of the New General Hospital were bound to consider, but they were satisfied that the method would effect a great saving of labour. Thus, for example, there being no fireplaces, coal need not be carried about, dirt is avoided, and as there are neither steam nor hot-water heating pipes in any habitable part, there are no inaccessible places behind which dirt could accumulate. The air-supply is clean and the influx of dirt and dust by means of open windows is avoided. As to the ducts and flues, they are of large size, readily accessible, and provided with means for periodic cleansing.

Lastly, the proposal to deal with the infected air of hospitals with the view of ensuring an innocuous effluent of air into the outer atmosphere is perhaps the most interesting, if not important, aspect of the propulsion system. It has been shown that the mere interposition of moist screens eliminates the greater part of bacteria and fungi from the air, but the use of a liquid disinfectant for this purpose would probably not only effect the arrest of the germs, but also their extinction. The latter object has been attempted with variable success by means of heat. In this connexion Dr. Barry's report to the Medical Department of the Local Government Board on "Certain Methods in use for the Sterilisation of the Exit Air from the Wards of Small-pox Hospitals" is of interest. The following is a comment upon this report which appeared in these columns[2] under the heading of "The Cremation of Infected Air":

"Attempts have been made of late to carry into practice the suggestion made some twelve years ago by Professor Burdon Sanderson that the risk of aerial convection of disease might be met by disinfecting the air passing from infectious wards by drawing the air along definite channels and sterilising it by exposure to heat. In the hospitals recently erected by the Nottingham, Barnsley, and Bradford corporations the architect in each case had sought by means of furnaces in the course of the outlet shaft to secure the double object of ventilation by extraction and the 'cremation' of the outgoing air. At Barnsley and Nottingham gas-furnaces were employed for the purpose, and air was admitted to the wards by windows and ordinary inlet-ventilators, while at Bradford extraction was effected by a powerful furnace to which the outlet flues were conducted, and special inlet flues were provided through which alone air was permitted to enter. In the two former places the results were in no sense satisfactory. The extraction was insufficient to prevent occasional outflow of air from the ward through openings meant to serve as inlets only, and the air, after passing the furnaces, was found to be by no means sterile, but, on the contrary, to contain microbes capable of cultivation on agar-gelatine. The draught, too, tended to extinguish the gas jets, and at the Nottingham Hospital bits of cotton-wool and tissue paper were carried through intact. At Bradford, again, the sterilisation proved to be incomplete, and, although the arrangement of inlets was such as to prevent any reversal of the current in them and leakage of infected air, Dr. Barry very properly takes exception to the precarious character of a system of ventilation which is dependent solely and absolutely upon uninterrupted efficiency of stoking. It is possible that better results may be obtained by the aid of propulsion, or mechanically forcing fresh air into the wards, an excellent example of which—at the Victoria Infirmary, Glasgow—is described in the appendix to the Memorandum; but it seems clear that up to the present time the attempts based upon extraction alone have been attended with such a very modified degree of success as to count as failures in practice."

[1] The necessity of a precautionary device of this kind in infectious diseases hospitals has recently been strikingly emphasised in a series of experiments made by Mr. W. T. Burgess. In these experiments flies were placed in momentary contact with a cultivation of *bacillus prodigiosus* (or other suitable chromogenic organism) and allowed to escape into a large room. After some time they were recaptured and caused to walk for a few seconds over slices of sterile potatoes, which were then incubated for a few days. The experiments showed that the flies' tracks on the potatoes were marked by vigorous growths of the chromogenic organism, even when the flies spent several hours in constant activity before they were recaptured. The use of pathogenic organisms in these experiments would of course be attended with obvious dangers, but the result obtained with harmless microbes indicate the constant risks to which flies may expose human beings. Vide THE LANCET, May 4th, 1895.

[2] THE LANCET, Sept. 8th, 1894.

The Key method of ventilation has met with very distinct success where it has already been installed, as, for instance, at the Victoria Infirmary, just mentioned, in several schools, and in other public buildings,[3] and the results of its adaptation to a large general hospital such as that in course of erection in Birmingham will be watched with very great interest, the completion of this admirably designed building being expected in about two years' time. The practicability of the method, however, is obvious. The important proposal of the architect, Mr. Henman to disinfect the outgoing air of infected wards where the Key method of ventilation is in force has of course not yet been put to practical test, but there is good ground for believing, as we have already shown, that this important adjunct to Mr. Key's methods of applying the propulsion system of ventilation may offer a really satisfactory solution of that difficult question of how to make infectious diseases hospitals safe to the surrounding neighbourhood. At any rate, the method, with its proposed augmentation, is of sufficient importance and scientific merit to demand the careful and serious consideration of all those interested in the vital questions of the ventilation and the purification of the air emitted from infected buildings.

We congratulate the authorities at Birmingham on the trouble and care they are taking to provide and equip a hospital fully in accordance with the requirements of modern scientific research, and we trust that other communities which may be brought face to face with a similar problem will evince an equal share of anxiety to attain so admirable and worthy an end.

SANITARY INSPECTORS' ASSOCIATION.

ON May 3rd Sir Walter Foster received a deputation from the Sanitary Inspectors' Association, who laid before him their views as to the form in which the proposed Examination Board for granting certificates to sanitary inspectors should be constituted. There were present Sir Benjamin W. Richardson, Lord Chelmsford, Mr. Percy Thornton, M.P., Messrs. W. H. Alexander and W. W. West (Vice-Chairmen of the Sanitary Inspectors' Association), C. W. Raymond (treasurer), J. Young, R. Chamberlain, A. Grant, A. Chaddeton, T. G. Dee, F. W. Strutt, C. T. Wilson, A. Taylor, T. Ashdown, W. H. Grigg, and Edward Tranmer (honorary secretary).

Sir B. W. RICHARDSON: This deputation is the outcome of a conversation that took place at the last meeting of our Association. We, as an association, are very anxious to get a good examining board; it is very essential to the inspectors themselves, as it would be a spur to action on their part in carrying on the sanitary improvement which has been so very marked of late years. The sanitary inspectors are very anxious concerning the status and respectability of their calling. They would like to follow the medical profession in respect of recognising no one who is not duly qualified. You are aware that some years ago when the Sanitary Institute was first established we started an examining board, of which I was a member, and this examining board has continued to hold examinations and grant certificates to sanitary inspectors up to the present time. I think in many respects the Sanitary Institute has done its duty in this matter very well. But it does not seem to us at all a satisfactory state of things that an outside body like the Sanitary Institute should have the monopoly of the power to grant such certificates; nor does its certificate seem to us a sufficient guarantee of qualification. Lastly, there has been a proposal that a sort of limited company should be formed, which company should be incorporated under the Companies Acts and have a hall of its own, something like the Apothecaries' Hall, and that this company should elect a body of examiners. But the Sanitary Inspectors' Association has come to the conclusion that the Local Government Board itself should elect an examining board. The Sanitary Institute would like men like yourself, who are acquainted with those best fitted to be examiners in such subjects, to select the most competent individuals to form such a board. A board of examiners appointed by you would be perfectly independent of all interests: they would not be looking for fees, or be influenced by any society feelings or considerations, but would be thoroughgoing examiners. Then, again, they would not only be independent, but they would occupy a secure position. You will hear presently that the Board of Trade is doing precisely what could be done by the Local Government Board. This is the suggestion which we want to submit to you before anything is done. I think if it were acted upon it would not only be the most beneficial plan, but the action would be politically sound.

Mr. ALEXANDER: We ventured a short time ago to address you on the subject of the tenure of office of sanitary inspectors and the inadequacy of the salaries appertaining to those offices, matters in which we were deeply interested and which greatly affected the public welfare. But we now come to you on a matter of even greater importance, and one in which we believe the public to be even more concerned. No doubt, in the first instance, the examinations conducted by the Sanitary Institute were carried on with very great advantage to all concerned; but our attention was some time ago drawn to the fact that the examinations were not all we could desire, and we made repeated efforts to come to an understanding with the Sanitary Institute. We made certain advances to them with a view to rectifying what we considered was lacking in the examinations and what we considered might be done to make the examinations more useful. These advances were not met in the spirit we had hoped they would be, and, therefore, our position remains unchanged up to the present. We think sanitary inspectors are often appointed who are not qualified in the way we have a right to expect, and we are anxious to improve their status. We feel that we are justified in bringing under the notice of the Government the fact that a sound examination is absolutely necessary in the interests of public health. Since the Sanitary Institute started holding these examinations other large bodies have been formed and have become interested in this matter—e.g., our own association, the British Institute of Public Health, and the Institute of Medical Officers of Health. A sort of limited company, comprising representatives from all these, has been suggested to form an examination board. We are very strongly of opinion that no private enterprise will meet public requirements in this direction and that it is only by a sound examination undertaken by the Government that satisfactory results can be secured.

Mr. GRIGG (Fulham): We thought in bringing this matter before you that you were not very likely to be satisfied with our taking certain generalities for granted, and that we ought to be prepared with some detailed scheme. With that object I have made very careful inquiries into the methods of examination for candidates for various professional appointments—e.g., factory inspectors and Board of Trade inspectors of weights and measures. I have more especially studied the method of granting certificates by the Board of Trade to marine engineers. These marine engineers occupy positions of great responsibility as regards human life, and I think I need not say much to convince you, Sir, that we as sanitary inspectors also hold positions of equally great responsibility. I will ask you to allow me to point out the sections of the Merchant Shipping Act under which these examinations are carried out. Well, sir, we think that that is the sort of thing that is required for us. We think an examining board appointed by the Government on these principles, composed of persons who had no gain to make out of the candidates, would be a much more satisfactory state of things than any which has obtained up to the present. One of the main points which we wish to urge upon you in connexion with our scheme is the absolute necessity for a man to have actual practical experience before he presents himself as a candidate. The present certificate is in its way very good, but if so purely theoretical an examination is adhered to it will only result in a great number of weak inspectors, unqualified for the positions they have to fill, being appointed. We do not wish to claim an undue share of representation for the Sanitary Inspectors' Association, but we do think that we are entitled to be represented on any board of examiners that may be established. It is of great importance that these posts should be held by men who have had actual practical experience of the work of the men they are called upon to examine.

Sir WALTER FOSTER: I think it will be my duty to say a word or two with reference to the actual position of the Board in this matter. I did not exactly understand that the object

[3] Mr. Key's method has been applied already to four hospitals or infirmaries, to some twenty-four large schools, and to several other large buildings, as cloth factories, police-courts, public libraries, and so on, while further installations are being provided for in fifteen similar buildings at the present time.

of your visit to-day was in reference to the form in which the proposed examining body should be constituted. I think, therefore, I had better point out the exact position in which we stand. The fact is that we are placed by statute in the position of having to recognise some body which shall examine and grant certificates to sanitary inspectors. The clause in the statute is as follows: "A sanitary inspector appointed after Jan. 1st, 1895, shall be holder of a certificate, of such body as the Local Government Board may from time to time approve, that he has by examination shown himself competent for such office." Well, now, hitherto the Local Government Board has been in the habit of accepting, *as a temporary provision purely*, the certificates of the Sanitary Institute, who have constituted themselves an examining body and elaborated a scheme of examination. Up to the present time they have continued to hold examinations and grant certificates to gentlemen desirous of following your calling. But it must be evident that this temporary expedient is not one which in the very nature of things could become permanent, because other bodies have come into existence, have obtained powers and Articles of Incorporation, and are desirous of holding examinations and granting certificates. They naturally wish that they should have a chance alongside of others. One of the first experiences I had on coming to this office was to have applications made to me from such bodies to be allowed to enter the field. The probability is that when the law is altered these certificates will be required not only in London, but in every part of Great Britain, so that in course of time there will be a great number of persons holding these certificates. It is therefore of the first importance that the certificates should be of the highest possible order. It must be obvious to you that the position of the Local Government Board is such that we have to take a certain line of action. In the first place it would be impossible for any Minister here to guarantee to the body at present having the monopoly of holding examinations that such body should retain the monopoly in the future, because a succeeding Minister might come in and say, "Such and such a body is as capable of granting certificates as you are, and I shall give them power to do so." And so in course of time you would have the most deplorable state of things possible—viz., competition between two or more examining bodies. Competition in examination is always injurious in its effects, because the tendency inevitably is for each competing body to lower the standard of examination in order to attract candidates. It is the general experience of all teachers that, whilst competition in teaching in the very nature of things tends to elevate the character of the teaching, all examining competition tends to deteriorate the character of such examining. These principles are not theoretical—I have seen them in actual practice in the medical profession; and I have been very anxious that the sanitary inspectors, as a branch of the great health army of this country, should not be placed in the same position and be overtaken by the same difficulties as gentlemen in my own profession have been through a competition of examinations. For these reasons the Board felt that it would be fatal to give to a number of bodies the power to grant these certificates. The question then arose: Is the Sanitary Institute to go on having the monopoly of conducting these examinations? Well, in the face of other applications and other claims to public consideration, I could not see my way to allowing the Sanitary Institute to continue indefinitely in the exercise of these examining functions. I therefore suggested that all the societies should meet together and form a Joint Board which should be established on such a basis as to be permanent and not likely to be disturbed in the future. One essential characteristic of such a body was that it should represent all the other bodies which were themselves competent to grant certificates. Another is that it should be able in the future to receive into itself any body which might become competent to grant them. In this way a Joint Board would be formed which would represent all other societies and associations so completely that no Minister in the future would feel justified in putting a new body into the field to compete with it, because such new body could join with and be represented on the Joint Board. We have had a good many difficulties to contend with in forming this Joint Board. It seemed to me that the remarks of Sir Benjamin Richardson as to the limited company idea were somewhat misleading. It was suggested that the body to be formed might be incorporated under articles and so get a corporate existence which it would not get otherwise. Of course, it would not be for trade purposes. That particular form is not necessarily unalterable, and if any great objections to it should arise hereafter I do not think there would be any insuperable difficulty in altering it. It would bind the Joint Board down to certain definite purposes, and to these purposes only, in conducting their work as long as they remain incorporated. It seems to me that if such a board be constituted: 1. It must be an examining body and in no sense a teaching body. 2. It must give certificates for the purpose of qualifying gentlemen as they have been qualified hitherto, and those who possess certificates already will in no wise be injured, as their certificates will be held to be equal in value to the new ones. 3. The several bodies at present existing in connexion with the training of sanitary inspectors and the teaching of sanitary science must as far as possible be recognised by this Joint Board. In constituting this body we must try to deal equitably with the various societies concerned. 4. This Joint Board must have the power of adding to itself from time to time new bodies; just as in the case of the General Medical Council Parliament has recognised that gentlemen already possessing qualifications as medical men should have the power of electing representatives to sit on that Council, so in future sanitary inspectors might be represented. You suggest to me that the Joint Board ought to contain some men who have practical experience in the work. I certainly agree with you in that. I may point out to you that we have no statutory powers to do what the Board of Trade does, and even if we were to do as you suggest a body so formed would not, in my opinion, be in any way so satisfactory as a body formed by the mutual combination of outside societies.

A SANITARY INSPECTOR: I think the Sanitary Inspectors' Association feel that they have been left out in the cold in this matter. They have never been in any way consulted.

Sir WALTER FOSTER: The difficulty, you see, is this—that you are not as a body of sanitary inspectors registered, and are, therefore, incompetent for the moment to be represented on the Joint Board. But I have considered, and I will again consider, whether there is any means by which a body like yourselves could properly be represented on the Joint Board. If there is you may be assured that no effort will be spared on my part to find it.

LORD CHELMSFORD then moved a vote of thanks to Sir Walter Foster for having received the deputation.

Mr. PERCY THORNTON, M.P., seconded it, and the deputation withdrew.

KING'S COLLEGE HOSPITAL FESTIVAL DINNER.

THE AMERICAN AMBASSADOR ON "A SOCIAL DUTY."

THE festival dinner of King's College Hospital was held at the Whitehall Rooms of the Hôtel Métropole on Wednesday, May 1st. His Excellency the Hon. Thomas F. Bayard, Ambassador of the United States, who presided, said that a hundred and fifty years ago a learned judge, Sir Michael Foster, defined a dangerous criminal as one whose heart was totally devoid of social duty, who was fatally bent on mischief. He said that King's College Hospital presented a complete antithesis; it was a safeguard—a fortress. The feeling which originated it, the feeling which maintained and continued it, was not mere sentiment, but was a force of social safety. It had been questioned whether the State should officially look to the rectification of the inequalities of fortune, whether the State should take these things in charge officially, or whether another and broader spirit should assist to equalise the fate of humanity. He said that the hospital sprang from King's College, and from the Medical School of King's College. Patients wanted the Medical School, and then came the hospital: the demand created the supply. On the other hand, he held that officialism begets a certain stiffness of joints far short of the needs of the case. Hospitals, he maintained, should rely upon the voluntary principle of benevolence, they should be guided by the human principle of the relationship and brotherhood of mankind. Admission to a hospital should be untrammelled by any law but the brotherhood of humanity; no question should be asked but "Do you need our aid." With this rule nothing more democratic or humane could be imagined. For the State to levy taxes for

the support of hospitals, arithmetically and by mere officialism, would not meet the case. Something higher was needed—viz., the generation of personal impulse. Humanity was needed to supplement the harsh spirit of the law. Financial assistance was needful, but it only supplied the machinery, not the motive force. Money was wanted in every hospital, but what was of greater value was the force of personal benevolence, of individual kindliness, which constituted the true strength of any system of government. The potency of this helped the patient after he had left the hospital; the sense of the benevolent attention he had received lingered in the mind of the recipient and made him a safe member of society. After visiting King's College Hospital he came away penetrated by the atmosphere of thought and feeling which pervaded it. It was impossible to conceive that officialism or State aid could help in producing this result, which he believed could only have developed under a voluntary system. In this it must be remembered that there was advantage to the helpers as well as to those helped. In one year the beds of the hospital ministered to the needs of 25,000 cases—a number equal to the regular army of the United States. Oliver Wendell Holmes had drawn a picture of two armies, one having the motto, "Our duty is to save," and this one represented the true force and value of those engaged in hospital work. Later in the evening, in responding to the toast of "The Chairman," he said that his part in life was to consider human government, and that he believed the strongest force in mankind was sympathy. He held that the affections of mankind are stronger than their passions. Passions flash and burn out, but the greater part of the world's forces are the human sympathies, which possess a permanence and endurance lacking in passion. He extolled the steady, serene, unscorching influence of human relationship to suffering, as compared with the passionate demands for power and domination, which were opposed to sympathy. He thought that in national affairs liberty might constitute a source of danger. If liberty made for human advancement it was well, but otherwise dangerous results might follow. What was the future of a nation of men set free unless there was an instinct to set free liberty to the advantage of all by human sympathy and human dependence? The object to be looked for should be the cultivation of a feeling in the weakest and humblest that all hearts were enlisted for their welfare.

MIDWIVES REGISTRATION BILL.

THE following is the text of the Bill intituled an Act for the Compulsory Registration of Midwives introduced in the House of Lords by Lord Balfour of Burleigh on April 30th:—

Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. This Act may for all purposes be cited as the Midwives Act, 1895.

2. In this Act—

The term "midwife" means a woman who undertakes to attend cases of natural labour without the direct supervision of a medical practitioner.

"Midwives Register" means a register of midwives kept in pursuance of this Act.

"Midwives Board" means the board constituted under this Act for the purpose of carrying out the provisions of the Act, subject to the approval of the General Medical Council.

3.—(1.) From and after Jan. 1st, 1896, no woman shall be entitled to take or use the name or title of midwife (either alone or in combination with any other word or words), or any name, title, addition, or description implying that she is registered under this Act, or is specially qualified to act as a midwife, unless she be registered under this Act.

(2.) Any person who after Jan. 1st, 1896, not being registered under this Act, shall take or use the name of midwife, or any such other name, title, addition, or description as aforesaid, shall be liable on summary conviction to a fine not exceeding five pounds, provided that nothing in this section shall apply to legally qualified medical practitioners.

(3.) No woman shall be placed on the Midwives Register until she shall have complied with the rules and regulations for admission to registration to be laid down in pursuance of the terms of this Act by the Midwives Board, acting under the supervision of the General Medical Council.

4. A woman registered under this Act shall be entitled to act as a midwife in England and Wales. From and after the first day of January, one thousand eight hundred and ninety-six, no woman shall be entitled to recover any fee or charge in any court for attendance or service rendered as a midwife unless such woman be registered under this Act, and the certificate of registration under this Act shall be a certificate entitling a woman to act as a midwife in cases of natural labour only, in accordance with the prescribed regulations made in pursuance of the terms of this Act. A certificate under this Act shall not confer upon any woman any right or title to be registered under the Medical Act, 1858, or the Acts amending the same, in respect of such certificate, or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery, or that she is qualified to grant a certificate of death or of still-birth.

5. Any woman who at the passing of this Act is in *bonâ-fide* practice as a midwife, or has obtained a certificate in midwifery from some hospital or workhouse infirmary, or from the Royal College of Physicians of Ireland, or from the Obstetrical Society of London, or such other certificate as may be approved by the General Medical Council, and claims to be registered before the expiration of two years from the passing of this Act, and produces the prescribed evidence of her title to be so registered (such title to be determined by the General Medical Council), shall be entered on the Midwives Register at such reduced fee as the Midwives Board shall prescribe.

6. Within six months from the passing of this Act a Midwives Board shall be formed, which shall consist of twelve registered medical practitioners, three to be appointed by the Royal College of Physicians of London, three by the Royal College of Surgeons of England, three by the Society of Apothecaries, and three by the Incorporated Midwives Institute. One-fourth of the members of the board shall annually retire, but shall be eligible for re-election after the lapse of one year. The duties of the Midwives Board shall be as follow:—

(*a*) To make rules for conducting and superintending the examinations.

(*b*) To conduct the examinations and appoint, if necessary, assistant examiners.

(*c*) To decide upon the places where and the times when examinations shall be held.

(*d*) To frame for approval by the General Medical Council rules regulating the admission to the register of women already in *bonâ-fide* practice as midwives at the passing of this Act.

(*e*) To prepare annually a general register of midwives.

(*f*) To frame for approval by the General Medical Council rules for regulating the practice of midwives.

(*g*) To decide upon the removal from the register of the name of any midwife for cause shown, and upon the restoration to the register of the name of any such midwife so removed.

(*h*) To fill up any casual vacancies in the Midwives Board that may occur.

(*i*) And generally to do any such duty as may be necessary for the due and proper carrying out of the provisions of the Act.

7. For the purpose of the examination of women desiring to act as midwives the Midwives Board shall, as soon as may be after the passing of this Act, frame, subject to the approval of the General Medical Council, rules regulating the conditions of admission to examinations, the course of study to be pursued previous to examination, the method, the periods, and the subjects of such examination, and the general standard to be attained by women passing the examination.

The General Medical Council shall submit the rules approved by them to the Privy Council for confirmation, and the rules when so confirmed shall be forthwith officially published under the superintendence of Her Majesty's Stationery Office. In the event of the General Medical Council failing to perform the duties entrusted to it under this Act, the Privy Council shall invite some other suitable body to undertake these duties, or shall itself forthwith proceed to do so.

8. There shall be payable by every woman presenting herself for examination a fee of two guineas. Should a candidate fail to pass, then for her second or any subsequent

examination the fee shall be half a guinea. In respect of registration, the fee shall be five shillings. All fees paid by midwives or by candidates for examination shall be paid to the Midwives Board. Such board shall devote such fees firstly to the payments connected with the examination and registration, secondly to the general expenses of the board.

9. The Midwives Board shall provide by their regulations for the keeping, and the publication from time to time, of a General Register of Midwives.

10. The Midwives Board shall every year cause a new edition of the register kept by them under this Act to be printed and published, and a copy of such register for the time being shall be evidence in all courts that the women therein specified are registered according to the provisions of this Act; and the absence of the name of any woman from such copy shall be evidence, until the contrary be made to appear, that such woman is not registered according to the provisions of this Act. Provided always, that in the case of any woman whose name does not appear in such copy, a certified copy under the hand of the registrar of the entry of the name of such woman on the register shall be evidence that such woman is registered under the provisions of this Act.

11. The Midwives Board shall appoint the registrar, who may also act as secretary to the board. He shall be charged with the custody of the register.

12. Each medical officer of health throughout England and Wales shall be supplied with a copy of the register from year to year, and he shall keep this register accessible at all reasonable times for public inspection. Such medical officer of health, or other registered medical practitioner as the local authority may appoint, shall be the local supervising authority over midwives in his district. It shall be his duty to report to the Midwives Board any case of malpraxis, negligence, or misconduct on the part of a midwife in his district which has come to his knowledge. For his services he shall receive such fees as the Midwives Board shall determine. No midwife shall commence practice in any district until she has first produced her certificates to the medical officer of health for the district in which she purposes to practice.

13. The registrar of deaths for the district shall at once report to the Midwives Board the death of any midwife in his district, so that her name may be immediately erased by the registrar from the register.

14. Any woman who wilfully procures or attempts to procure herself to be placed on the register of midwives by making or producing, or causing to be made or produced, any false or fraudulent declaration, certificate, or representation, either in writing or otherwise, and any person assisting her therein, shall be deemed guilty of a misdemeanour, and shall on conviction thereof be liable to a fine not exceeding £10, or to be imprisoned with or without hard labour for any term not exceeding three months.

15. Any registrar who wilfully makes or causes to be made any falsification in any matter relating to the register of midwives shall be deemed guilty of a misdemeanour and shall be liable to a fine not exceeding £20, or to be imprisoned with or without hard labour for any term not exceeding six months.

16. Any offences under this Act punishable on summary conviction may be prosecuted, and any fine under this Act recoverable on summary conviction may be recovered, in manner provided by the Summary Jurisdiction Acts.

A prosecution for an offence under this Act shall not be instituted by a private person except with the consent of the Attorney-General, but may be instituted by a county council or the council of a municipal borough. The expenses of any prosecution shall be defrayed out of the county fund of the district where the prosecution takes place.

17. Where any woman deems herself aggrieved by any order, conviction, judgment, or determination of, or by any matter or thing done under this Act by any court of summary jurisdiction, such woman may appeal therefrom to the court of quarter sessions.

18. This Act shall not extend to Scotland or Ireland.

"SO NEAR AND YET SO FAR!"

A CORRESPONDENT sends us a photograph which we reproduce. Professor Montani is evidently a philanthropist of the highest order. He may be, as per advertisement, consulted free of charge from 10 A.M. to 9 P.M., we suppose, but the photograph does not go quite far enough. For a man of this marked kindliness of heart, however, he exhibits a *hauteur* and exclusiveness which are even painful. "Professor Montani has no connexion with the Surgery next door." This notice is thoughtful in one way; for it saves the owner of the "surgery next door" from putting up a like statement.

On the right-hand side of the picture the reader may see a shadowy pair of legs walking on the pavement. The camera, as is well known, now occupies the place hitherto taken by the second-sighted people who existed among the ancient Greeks and are still found among the Highlanders—that is to say, it sees things which are invisible to the ordinary eye. If the seer saw only the legs of a person, the upper parts of the body being shrouded in a mist, it was a presage of his early death. So Theoclymenus, the second-sighted man, says in the *Odyssey*[1] before the slaying of the suitors: "Ah! wretched men, what woe is this ye suffer; for in night are shrouded your heads, and faces, and knees?" Whether the presentiment is about to be fulfilled for the owner of these legs we are unable to say.

[1] Od., xx., 350.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

River Tyne Port Sanitary Authority.—Mr. Henry Armstrong reports that no cases of cholera were brought into the waters of his district during 1894, although in two ships arriving indirectly from Jeddah there had been during the voyage 100 and 111 cases of cholera respectively. The time and energy of the port sanitary officials were both greatly taxed by night and day, there being no less than 330 arrivals from cholera-infected ports during the months of August and September. The new disinfecting hulk is now in use. It contains tanks for perchloride of mercury solution, a steam disinfecting apparatus, and a store of liquefied sulphurous acid. There was a marked falling off in the number of emigrants passing through the Tyne Port during 1894 as compared with the previous year, the numbers being 193 and 1015 respectively. The emigrant vessels are visited by the inspectors on arrival and kept under supervision whilst in port. During the year under review there were 6970 coasters and 5073 foreign vessels inspected, and among the coasters we note with pleasure that many were fishing craft. The importance of controlling the sanitary condition of the fishing vessels is seen from the fact that there arrived in the waters of the port during 1894, 5765 trawlers and 9802 herring boats. Large consignments of herring and other fish come, Mr. Armstrong reports, from Denmark, Norway, and Sweden. Twenty-four cattle ships arrived in the Tyne in a filthy condition after having landed cattle elsewhere, and all these vessels were cleansed under the inspector's supervision.

Cheltenham Urban Sanitary District.—The general death-rate of this district was for last year 14·93 per 1000, as against an average for the ten previous years of 17·40. The infantile mortality was 128 per 1000 births, and the zymotic death-rate 0·53 per 1000 living. Cheltenham has provided a public abattoir, but apparently it does not find favour in the eyes of the butchers, and there is no power to close the private slaughter-houses. Dr. J. H. Garrett observes that some of the twenty-six registered slaughter-houses are mere hovels, quite unfit for the purposes for which they are used. We notice that Dr. Garrett publishes in his report a list of those butchers who during the year have made use of the abattoir—a step which may, we imagine, have good results. From the standpoint of the public health and the prevention of cruelty to animals there can be no two opinions as to the desirability of a public abattoir. An additional water-supply for Cheltenham from the river Severn at Tewkesbury has now been introduced, new filters have been provided, and the water proved on chemical analysis to be, Dr. Garrett states, superior in quality to that delivered from Dowdeswell. The Severn water is supplied in separate pipes and has been used for the most part for street watering, baths, &c. Steps are now to be taken to increase the purity of the Dowdeswell supply. There are still, it appears, some 3000 houses in Cheltenham supplied with water from shallow wells sunk in sand and with old sewers and house drains running near. The quality of the water in these wells is, Dr. Garrett observes, subject to peculiar and dangerous variation. We can well believe it, and we trust Dr. Garrett will be successful in his attempt to get them all closed.

Hull and Goole Port Sanitary District.—In relating the detailed work of his department during 1894 Dr. Wright Mason reports that in eighteen vessels the bow lockers were used for storing paints, leads, &c., but that these breaches of the regulations were remedied before the vessels left Hull. In several lighters lying in the docks foul bilges were discovered, and steps were taken to abate the nuisance. During 1894 there were but 19,309 emigrants passing through the port *en route* for America, as against 46,553 during 1893. As regards water-supply eighty-three vessels were found to have taken it in at a cholera-infected port, and all the tanks thus supplied were at once emptied and cleansed. In the case of some other vessels samples of water were submitted to chemical analysis and pronounced unfit for consumption. It would have been very instructive could some of these samples have been submitted to bacteriological examination. Dr. Mason makes a suggestion, in which we cordially concur, that in the construction of ships attention should be directed to the more modern requirements of sanitation.

Teignmouth Urban Sanitary District.—Dr. F. Cecil Piggott, while referring in his current annual report to the subject of enteric fever, furnishes some evidence which tends to incriminate certain mussels or cockles as having been the cause of four, if not seven, of the cases. The four patients in question had each partaken of the shellfish within fourteen days of attack, and the other three were intimately connected with the fish trade. All these cases were inexplicable on a thesis of water- or milk-borne infection. The shellfish under suspicion were, it appears, obtained from the river Teign, near the outfall of a drain leading from the fever hospital, in which was a patient suffering from enteric fever. It is impossible, Dr. Piggott remarks, to be certain that the excrement had been properly disinfected. The circumstances are interesting and well worth recording, more especially if the shellfish were eaten raw and not cooked.

Sunderland Port Sanitary District.—Some idea of the very salutary effect which the recent cholera prevalence in Europe had in awakening port sanitary authorities to greater efforts may be obtained from Mr. John C. Wood's annual report for 1894. He states that during the year in question, although 2688 vessels were inspected by the sanitary inspector, it was only on two occasions that written notices had to be served for the abatement of nuisances. Defects were, no doubt, detected in many more instances, but it speaks well for the energy of the sanitary authority, and more especially for the tact of its officers, that the machinery works with so little friction. The vessels which were in the best sanitary condition were the Dutch and Danish; of the Spanish, Greek, and Belgian vessels a large percentage were insanitary.

Uxbridge Rural Sanitary District.—The Uxbridge Joint Hospital is the hospital provision used by this district, and in regard to it Mr. Charles Roberts observes that it would be better could the different diseases be more widely separated and nurses appointed for each; also, he remarks, it would be beneficial if patients when convalescent could be isolated for a time before returning to their own homes, as it sometimes happens that infection is carried to their relatives in spite of all precautions taken by the staff. By this we infer that Mr. Roberts advocates the passing of patients through a convalescent home—a course which to some degree is practised by the Metropolitan Asylums Board. As to the value of such a course from the point of view of complete recovery there can be little doubt, but we fear that even with these precautions return cases will from time to time occur.

Towyn Urban Sanitary District.—The infantile mortality in this district was, during 1894, 164 per 1000 births, and Mr. F. H. V. Grosholz, in referring to the causes of such mortality, impresses upon mothers the importance of paying proper regard to health during pregnancy. He also draws the attention of the council to the desirability of employing a trained nurse to instruct the poor in the matter of feeding, clothing, and general care. This, of course, means that the sanitary authority should aid in educating the poor in the intelligent care of their children, and certainly it is only by some such means as this that a lasting diminution can be made in the infantile mortality of the country.

Aberavon Urban Sanitary District.—Among the cases of small-pox which occurred in the district during the latter part of 1893 and the earlier months of 1894 Mr. Arnallt Jones reports that one patient probably contracted the disease by acting as bearer in the funeral of a person dead from small-pox, while two other cases occurred among those employed in destroying infected clothing and bedding.

King's Norton Rural Sanitary District.—Dr. Francis Hollingshead, in discussing the protective value of vaccination, records the instance of a vaccinated infant which remained unattacked by small-pox although at the breast of its mother, who was suffering from small-pox at a small-pox hospital. Apparently no one could be found to take care of the child during its mother's illness. Dr. Hollingshead found that school closure for measles was attended with beneficial results.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6893 births and 3551 deaths were registered during the week ending May 4th. The annual rate of mortality in these towns,

which had declined in the eight preceding weeks from 35·0 to 17·9 per 1000, further fell last week to 17·5. In London the rate was equal to 16·6 per 1000, while it averaged 18·1 in the thirty-two provincial towns. The lowest rates in these towns were 10·6 in Nottingham, 11·9 in Portsmouth, 12·4 in Leicester, 12·6 in Huddersfield, and 12·7 in West Ham; the highest rates were 22·9 in Blackburn, 23·2 in Liverpool, 23·3 in Oldham, 23·9 in Manchester, and 26·7 in Burnley. The 3551 deaths included 305 which were referred to the principal zymotic diseases, against 336 and 327 in the two preceding weeks; of these, 90 resulted from whooping-cough, 80 from measles, 49 from diphtheria, 39 from diarrhœa, 24 from "fever" (principally enteric), 22 from scarlet fever, and 1 from small-pox. No fatal case of any of these diseases occurred last week in Halifax; in the other towns they caused the lowest death-rates in Bristol, Bradford, Brighton, Leeds, and Sunderland, and the highest rates in Bolton, Burnley, Plymouth, Salford, and Preston. The greatest mortality from measles occurred in Plymouth, Manchester, and Bolton; and from whooping-cough in Plymouth, Birkenhead, Burnley, Preston, Salford, and Wolverhampton. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. The 49 deaths from diphtheria included 29 in London, 5 in Birmingham, 3 in Leeds, 2 in Birkenhead, and 2 in Sheffield. One fatal case of small-pox was registered in London, but not one in any of the thirty-two large provincial towns. There were 34 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 4th inst., against 47, 35, and 37 at the end of the three preceding weeks; 8 new cases were admitted during the week, against 9, 4, and 12 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1413, against 1463, 1514, and 1469 on the three preceding Saturdays; 107 new cases were admitted during the week, against 117, 162, and 132 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 389 and 341 in the two preceding weeks, further declined to 290 last week, and were 55 below the corrected average. The causes of 58, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Newcastle-upon-Tyne, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Burnley, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined in the three preceding weeks from 24·7 to 20·6 per 1000, rose again to 20·9 during the week ending May 4th, and was 3·4 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·6 in Dundee and 17·4 in Paisley to 25·1 in Greenock and 25·7 in Perth. The 602 deaths in these towns included 27 which were referred to measles, 17 to whooping-cough, 13 to diarrhœa, 7 to scarlet fever, 4 to diphtheria, 3 to "fever," and not one to small-pox. In all, 71 deaths resulted from these principal zymotic diseases, against 78 and 73 in the two preceding weeks. These 71 deaths were equal to an annual rate of 2·5 per 1000, which was 1·0 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 30, 32, and 26 in the three preceding weeks, were 27 last week, of which 8 occurred in Edinburgh, 6 in Glasgow, 6 in Leith, and 4 in Aberdeen. The deaths referred to whooping-cough, which had been 17 and 24 in the two preceding weeks, declined again to 17 last week, and included 14 in Glasgow. The 7 fatal cases of scarlet fever exceeded the number recorded in any recent week, and included 4 in Glasgow and 2 in Edinburgh. The deaths from diphtheria, which had been 7 and 3 in the two preceding weeks, were 4 last week, of which 2 occurred in Glasgow. The 3 fatal cases of "fever" corresponded with the number in the preceding week, and included 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these eight towns, which had been 132 and 145 in the two preceding weeks, declined to 124 last week, but were 29 above the number in the corresponding period of last year. The causes of 46, or more than 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 29·7 and 27·0 per 1000 in the two preceding weeks, rose again to 27·3 during the week ending May 4th. During the past five weeks of the current quarter the death-rate in the city has averaged 31·1 per 1000, the rate during the same period being 18·3 in London and 19·5 in Edinburgh. The 183 deaths registered in Dublin during the week under notice showed a slight increase upon the number in the previous week, and included 7 which were referred to the principal zymotic diseases, against 3 and 5 in the two preceding weeks; of these, 4 resulted from whooping-cough, 2 from small-pox, 1 from diphtheria, and not one either from measles, scarlet fever, "fever," or diarrhœa. These 7 deaths were equal to an annual rate of 1·0 per 1000, the zymotic death-rate during the same period being 1·7 in London and 2·7 in Edinburgh. The 4 fatal cases of whooping-cough exceeded the number recorded in any recent week. The deaths referred to small-pox, which had been 1 in each of the two preceding weeks, were 2 last week. The 183 deaths registered in Dublin last week included 29 of infants under one year of age and 50 of persons aged upwards of sixty years; the deaths of infants considerably exceeded the number in the preceding week, while the deaths of elderly persons showed a decline. Five inquest cases and 3 deaths from violence were registered; and 51, or more than a fourth, of the deaths occurred in public institutions. The causes of 21, or more than 11 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1895.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality during April in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 5·7 per 1000 of the population, estimated at 4,392,346 persons in the middle of the current year. In the three preceding months the rates had been 7·0 5·9, and 5·8 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in St. George Hanover-square, Stoke Newington, St. Martin-in-the-Fields, City of London, St. Saviour Southwark, and St. Olave Southwark; while they showed the largest excess in Chelsea, Holborn, Limehouse, Poplar, Rotherhithe, Greenwich, and Plumstead. The prevalence of small-pox in London showed a slight further decline in April, 37 cases being notified during the month, including 9 in Holborn, 8 in Rotherhithe, 6 in Lambeth, and 3 in Islington sanitary areas. The Metropolitan Asylum Hospitals contained 34 small-pox patients at the end of April, against 51, 66, and 54 at the end of the three preceding months; the weekly admissions averaged 7, against 10, 15, and 11 in the three preceding months. The prevalence of scarlet fever in London showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Chelsea, Limehouse, Poplar, Rotherhithe, Greenwich, Lee, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 1413 scarlet fever patients at the end of April, against 1633, 1569 and 1485 at the end of the three preceding months; the weekly admissions averaged 132, against 148, 141, and 145 in the three preceding months. The prevalence of diphtheria in London showed a further increase during April; among the various sanitary areas this disease showed the highest proportional prevalence in Fulham, Chelsea, Strand, Whitechapel, Poplar, Rotherhithe, and Camberwell. There were 430 cases of diphtheria under treatment in the Metropolitan Asylum hospitals at the end of April, against 515, 461, and 435 at the end of the three preceding months; the weekly admissions averaged 69, against 71, 50, and 62 in the three preceding months. The prevalence of enteric fever in London showed a slight decline during the month under notice; among the various sanitary areas this disease showed the highest proportional prevalence in Paddington, Marylebone, St. George-in-the-East, and Greenwich. Erysipelas was proportionally most

MONTHLY ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON APRIL, 1895.

(*Specially compiled for* THE LANCET.)

Sanitary areas.	Estimated population in the middle of 1895.	Notified Cases of Infectious Disease.										Deaths from Principal Infectious Diseases.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,392,346	37	827	581	2	108	8	13	361	—	1937	5·7	—	107	44	105	188	—	19	—	53	5·6	1·5	6170	18·3	152
West Districts.																										
Paddington	122,756	2	20	14	—	6	—	1	8	—	51	5·4	—	1	—	1	1	—	2	—	1	6	0·6	143	15·2	177
Kensington	167,671	—	21	25	—	4	—	—	20	—	70	5·4	—	1	3	7	2	—	—	—	4	17	1·3	200	15·6	171
Hammersmith	108,429	—	13	13	—	3	2	—	8	—	39	4·6	—	1	—	2	3	—	1	—	—	7	0·8	115	13·8	97
Fulham	117,745	—	18	23	—	3	—	—	3	—	47	5·2	—	—	1	2	3	—	—	—	2	8	0·9	145	16·1	174
Chelsea	99,930	—	26	21	—	—	—	1	9	—	57	7·4	—	—	1	2	3	—	—	—	1	7	0·9	134	17·5	204
St. George Hanover-square	74,037	—	7	7	—	1	—	—	3	—	18	3·2	—	—	1	2	3	—	—	—	1	7	1·2	97	17·1	209
Westminster	54,003	—	6	7	—	—	—	—	2	—	15	3·6	—	—	—	2	5	—	—	—	1	8	1·9	77	18·6	198
St. James Westminster	23,149	—	2	2	—	—	—	—	2	—	6	3·4	—	—	—	—	1	—	—	—	—	1	0·6	30	16·9	136
North Districts.																										
Marylebone	137,392	2	26	15	—	7	—	—	12	—	62	5·9	—	—	1	2	3	—	1	—	1	8	0·8	198	18·8	92
Hampstead	77,592	—	16	7	—	1	—	—	—	—	24	4·0	—	1	1	1	—	—	—	—	—	4	0·7	66	11·1	125
St. Pancras	233,543	2	47	25	—	2	—	3	45	—	124	6·9	—	2	2	5	13	—	—	—	2	24	1·3	332	18·5	140
Islington	335,929	3	79	26	—	4	3	1	22	—	138	5·4	—	6	6	5	9	—	1	—	4	31	1·2	407	15·8	143
Stoke Newington	35,214	—	4	2	—	1	—	—	—	—	7	2·6	—	—	—	—	1	—	—	—	—	1	0·4	33	12·2	120
Hackney	215,123	—	41	20	—	8	1	—	13	—	83	5·0	—	5	3	3	7	—	—	—	1	19	1·1	272	16·4	115
Central Districts.																										
St. Giles	37,654	—	1	5	—	—	—	—	4	—	10	3·5	—	1	—	3	2	—	—	—	—	6	2·1	77	26·7	198
St. Martin-in-the-Fields	13,526	—	2	—	—	—	—	—	—	—	2	1·9	—	—	—	—	3	—	—	—	1	4	3·9	22	21·2	600
Strand	22,586	1	—	6	—	—	—	—	1	—	8	4·6	—	—	—	2	—	—	—	—	1	3	1·7	51	29·4	135
Holborn	32,188	9	7	2	—	1	—	—	—	—	19	7·7	—	1	—	—	1	—	—	—	—	2	0·8	63	25·5	106
Clerkenwell	65,036	—	8	8	—	2	—	—	5	—	23	4·6	—	2	—	2	7	—	1	—	1	13	2·6	101	20·2	141
St. Luke	40,763	—	6	2	—	2	—	—	6	—	16	5·1	—	1	—	1	1	—	1	—	1	5	1·6	84	26·9	199
City of London	33,824	—	2	2	—	2	—	—	1	—	7	2·7	—	—	—	—	1	—	1	—	—	2	0·8	55	21·2	105
East Districts.																										
Shoreditch	122,932	—	21	16	—	—	—	—	9	—	46	4·9	—	17	2	5	11	—	—	—	3	38	4·0	210	22·3	193
Bethnal Green	130,061	—	13	14	—	5	—	—	17	—	49	4·9	—	2	3	2	2	—	—	—	1	10	1·0	157	15·7	87
Whitechapel	75,820	1	10	21	—	—	—	—	7	—	39	6·7	—	3	—	2	1	—	—	—	1	7	1·2	123	21·2	131
St. George-in-the-East	45,227	—	12	4	—	3	—	—	3	—	22	6·3	—	1	—	1	3	—	1	—	1	7	2·0	94	27·1	133
Limehouse	56,885	1	16	11	—	1	—	—	5	—	34	7·8	—	8	—	1	4	—	—	—	—	13	3·0	100	22·9	191
Mile End Old Town	108,443	—	16	19	—	1	—	—	6	—	42	5·0	—	9	1	2	6	—	1	—	2	21	2·5	172	20·7	188
Poplar	171,230	—	61	40	—	6	1	—	13	—	121	9·2	—	21	1	8	4	—	3	—	3	40	3·0	295	22·5	207
South Districts.																										
St. Saviour Southwark	26,570	—	—	—	—	—	—	—	2	—	2	1·0	—	—	—	1	1	—	—	—	1	3	1·5	53	26·0	235
St. George Southwark	60,168	—	5	6	—	1	—	—	3	—	15	3·3	—	—	—	—	1	—	—	—	1	5	1·1	100	21·7	181
Newington	119,358	—	11	14	—	4	—	—	6	—	35	3·8	—	—	—	2	2	—	—	—	2	19	2·1	232	25·3	223
St. Olave Southwark	13,065	—	—	1	—	—	—	—	—	—	1	1·0	—	—	—	—	—	—	—	—	1	1	1·0	21	21·0	256
Bermondsey	83,561	—	17	8	—	4	—	—	3	—	32	5·1	—	—	1	1	1	—	1	—	—	4	0·6	129	20·1	183
Rotherhithe	40,713	8	15	10	—	1	—	—	5	—	39	12·5	—	1	1	2	2	—	—	—	2	8	2·6	64	20·5	157
Lambeth	284,883	6	56	30	—	8	—	1	33	—	134	6·1	—	9	3	1	21	—	1	—	3	38	1·7	417	19·1	140
Battersea	165,130	—	34	35	—	3	1	—	15	—	88	7·0	—	7	1	9	11	—	1	—	3	32	2·5	222	17·5	158
Wandsworth	185,556	—	31	18	—	7	—	2	20	—	78	5·5	—	6	1	4	2	—	—	—	1	14	1·0	217	15·2	125
Camberwell	252,727	—	37	10	—	5	—	—	22	—	124	6·4	—	—	4	13	12	—	1	—	1	34	1·8	341	17·6	135
Greenwich	175,183	2	48	29	2	11	—	2	8	—	102	7·6	—	1	2	5	12	—	1	—	1	22	1·6	266	19·8	140
Lewisham (excluding Penge)	82,410	—	14	2	—	1	—	2	7	—	26	4·1	—	—	—	—	6	—	1	—	—	7	1·1	82	13·0	137
Woolwich	42,768	—	10	5	—	—	—	—	4	—	19	5·8	—	—	—	2	2	1	—	—	1	6	1·8	57	17·4	144
Lee	38,832	—	14	1	—	—	—	—	3	—	18	6·0	—	—	—	—	1	—	—	—	—	1	0·3	43	14·4	128
Plumstead	61,494	—	34	5	—	—	—	—	5	—	44	9·3	—	—	—	1	1	—	—	—	—	3	0·6	73	15·5	140
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including 29 cases of membranous croup.

† Including deaths from membranous croup.

prevalent in Kensington, St. Pancras, St. Luke, Bethnal-green, and Lambeth sanitary areas. The 13 cases of puerperal fever notified during April included 3 in St. Pancras, and 2 each in Wandsworth, Greenwich, and Lewisham sanitary areas.

The mortality statistics in the accompanying table relate to the deaths of persons actually belonging to the various metropolitan sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, April 27th, the deaths of 6170 persons belonging to London were registered, equal to an annual rate of 18·3 per 1000 of the population, against 18·3, 30·3, and 30·0 in the three preceding months. The lowest death-rates during April in the various sanitary areas were 11·1 in Hampstead, 12·2 in Stoke Newington, 13·0 in Lewisham (excluding Penge), 13·8 in Hammersmith, 14·4 in Lee, and 15·2 in Paddington and in Wandsworth; the highest rates were 25·3 in Newington, 25·5 in Holborn, 26·0 in St. Saviour Southwark, 26·7 in St. Giles, 26·9 in St. Luke, 27·1 in St. George-in-the-East, and 29·4 in Strand. During the four weeks of April 516 deaths were referred to the principal zymotic diseases in London; of these, 188 resulted from whooping-cough, 107 from measles, 105 from diphtheria, 53 from diarrhœa, 44 from scarlet fever, and 19 from enteric fever. These 516 deaths were equal to an annual rate of 1·5 per 1000, which corresponded with the rate in each of the two preceding months. The lowest death-rates from these diseases during last month were recorded in Paddington, St. James Westminster, Stoke Newington, Bermondsey, Lee, and Plumstead; and the highest rates in St. Martin-in-the-Fields, Clerkenwell, Shoreditch, Limehouse, Mile End Old Town, Poplar, Rotherhithe, and Battersea sanitary areas. No fatal case of small-pox was registered in London during the month under notice, the corrected average in the corresponding periods of the ten preceding years being 20. The 107 deaths referred to measles were but little more than a third of the corrected average number; among the various sanitary areas this disease showed the highest proportional fatality in Shoreditch, Limehouse, Mile End Old Town, and Poplar. The 44 fatal cases of scarlet fever were 18 below the corrected average number; the mortality from this disease showed no marked excess last month in any of the sanitary areas. The 105 deaths from diphtheria were slightly below the corrected average number; this disease showed the highest proportional fatality in Kensington, St. Giles, Strand, Shoreditch, Poplar, Battersea, and Camberwell sanitary areas. The 188 fatal cases of whooping-cough were 90 below the corrected average number; among the various sanitary districts this disease showed the highest proportional fatality in Westminster, St. Martin-in-the-Fields, Clerkenwell, Shoreditch, Newington, and Lambeth. The 19 deaths referred to enteric fever were 17 below the corrected average number; there was no marked excess of "fever" mortality last month in any of the sanitary areas. The 53 fatal cases of diarrhœa were within 5 of the corrected average number. In conclusion, it may be stated that the mortality in London during the month under notice from these principal zymotic diseases was as much as 39 per cent. below the average.

Infant mortality in London during April, measured by the proportion of deaths under one year of age to registered births, was equal to 152 per 1000, and exceeded the average. Among the various sanitary areas the lowest rates of infant mortality were recorded in Hammersmith, Marylebone, Hackney, Holborn, City of London, and Bethnal Green; and the highest rates in Chelsea, St. George Hanover-square, St. Martin-in-the-Fields, Poplar, St. Saviour Southwark, Newington, and St. Olave Southwark.

† Including deaths from membranous croup.

* Including 23 cases of membranous croup.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

SURGEON-MAJOR MACLEAN and Surgeon-Captains Keatly and Weir have arrived from India in the *Malabar* on completion of a tour of service. Surgeon-Captain Watson has arrived from Egypt, and Surgeon-Major Michael and Surgeon-Captain Gray have left Egypt on completion of their tour. Surgeon-Major Hughes has been posted to Chatham, and Surgeon-Captain Young to Dublin.

INDIA AND THE INDIAN MEDICAL SERVICES.

Deputy Surgeon-General Sir Joseph Fayrer, M.D., F.R.C.S. Edin., K.C.S.I., Retired List Indian Medical Service, Honorary Physician to the Queen, late President of the Medical Board, India Office, is granted the honorary rank of Surgeon-General.

The following appointments are announced:—Surgeon-Captain J. W. Bullen, M.D., A.M.S., to the Civil Medical Charge of Ranikhet, in addition to his military duties; Surgeon-Captain J. M. Cadell, officiating Civil Surgeon, Sultanpur, to the Medical Charge of the Camp of the Lieutenant-Governor and Chief Commissioner, North-West Provinces and Oudh; Brigade-Surgeon-Lieutenant-Colonels G. Hutcheson, G. McB. Davis, H. T. Brown, and C. F. Pollock to officiate as Principal Medical Officers of the Lahore District, Punjab Frontier Force, Peshawar and Rawalpindi Districts respectively; Surgeon-Major F. C. Chatterji, Civil Surgeon, Philibhit, on being recalled from privilege leave to the Mainpuri District. The following officers of the Army Medical Staff have come out to India in succession to "tour expired" officers:—Surgeon-Lieutenants W. D. Erskine, H. A. Hinge, H. A. Bray, H. S. Thurston, J. G. McNaught, C. T. Samman, J. H. Farmer; Surgeon-Captains J. J. C. Donnet, C. S. Sparkes, R. L. R. Mcleod, J. B. Wilson, W. J. Trotter, M. J. Sexton, J. M. Nicholls; Surgeon-Majors R. F. O'Brien, P. J. Dempsey, O. Todd; and Surgeon-Lieutenant-Colonels J. Ring and W. E. Saunders. Surgeon-Major E. S. Brander, Civil Surgeon, is transferred from Mainpuri to Muttra.

NAVAL MEDICAL SERVICE.

The following appointments are notified:—Staff-Surgeon J. T. W. S. Kellard to the *Malabar;* Surgeon J. C. Wood to the *Hood*.

VOLUNTEER CORPS.

Artillery: 1st Kent (Eastern Division, Royal Artillery): Surgeon-Lieutenant J. I. Boswell, M.D., resigns his commission. 1st Argyll and Bute: The under-mentioned gentlemen to be Surgeon-Lieutenants: John William Watkin Penney, M.B.; David Johnston Penney, M.B. 1st Cumberland: Surgeon-Lieutenant W. J. Fairlie, M.B., resigns his commission. 1st Durham (Western Division, Royal Artillery): Surgeon-Lieutenant D. F. Todd to be Surgeon-Captain. 5th Lancashire: Surgeon-Captain C. W. Dean resigns his commission. *Royal Engineers:* 1st Aberdeenshire: Surgeon-Lieutenant W. Sinclair, M.B., to be Surgeon-Captain. *Rifle:* 1st Volunteer Battalion the Royal Warwickshire Regiment: Surgeon-Lieutenant W. P. Whitcombe to be Surgeon-Captain. 1st Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant W. E. R. Wood, M.D., to be Surgeon-Captain. 3rd Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant T. R. Bailey, M.D., resigns his commission. 1st Volunteer Battalion the Duke of Wellington's (West Riding Regiment): Edward Hawkesworth Hackett, Gent., to be Surgeon-Lieutenant. 4th (Perthshire) Volunteer Battalion the Black Watch (Royal Highlanders): Charles William Howartson, M.B., to be Surgeon-Lieutenant. 1st (Ross Highland) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Colin Mackenzie, Gent., formerly Surgeon-Lieutenant, to be Lieutenant. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Captain R. S. Turner to be Surgeon-Major; William Robert Duguid, jun., M.B., to be Surgeon-Lieutenant.

DEATH IN THE SERVICES.

Surgeon-Major George Laffan, M.D., Q.U.I., A.M.S., at Belgaum, Madras, on the 27th ult. Born in 1845, he graduated in 1876 at Queen's College, Cork, and was appointed a surgeon in the army in the following year. He attained the rank of surgeon-major in 1889. He served in the Soudan Expedition of 1884-85 (medal with clasp and the bronze star), and the expedition to Manipur, 1891 (medal and clasp).

"THE SCOURGE OF INDIA."

Surgeon-Major Perry Marsh, Army Medical Service, has published in the *United Service Magazine* of this month a rejoinder to the article which appeared from Brigade-Surgeon-Lieutenant-Colonel Climo in the preceding number of that journal. The scourge referred to is, as our readers are probably aware, enteric fever, about which we have also had a good deal to say in THE LANCET from time to time. Surgeon-Major Perry Marsh analyses the statements contained in Brigade-Surgeon-Lieutenant-Colonel Climo's

paper and deals with them *seriatim*. He challenges the correctness of the allegation that "the increasing prevalence and mortality from enteric fever in India is the direct consequence of regiments no longer having medical officers serving with them," and makes many strong points by using for the purpose of his argument a number of facts with which our readers and medical officers generally are no doubt acquainted. Surgeon-Major Perry Marsh adverts to the alteration that has taken place in the diagnosis of fever in India of late years as compared with a time when enteric fever was not sufficiently differentiated from other forms of Indian fever, and not recognised as it is now. He dwells upon the influence of youth and recent arrival as very important factors in increasing the susceptibility to this form of fever, and points to the fact that with a short service system the European force in India contains a far greater proportion of this susceptible material—young and recently arrived men—than it did formerly. He proves this by statistical evidence which has been sufficiently repeated year after year to leave no doubt; and he also contests the correctness of Brigade-Surgeon-Lieutenant-Colonel Climo's statements as to the influence of the selection of recruits and the invaliding rates of the army of India (which have declined from 40 per 1000 for the ten years ending 1870 to 25 3 per 1000 for 1893). The sanitation and cleanliness of Indian cantonments, from all we can gather, are well attended to—many of them, indeed, are models of cleanliness and neatness. It is outside cantonments, in the native bazaars, that insanitary conditions prevail so extensively. As we have frequently said, however, we are not satisfied with the present system of barrack-room water filtration, and were glad to see that a question was recently asked in the House of Commons about the remarkable improvement that had been effected in diminishing the amount of enteric fever in the French army by the use of their new form of filter. It is surely time that something was done in this respect for our army in India.

THE HOSPITALS FOR FIELD SERVICE IN INDIA.

The late Afghan War gave rise to a reorganisation of the medical service in India and to a complete remodelling of the field service equipment. A field hospital is equipped for 100 beds and it is capable of being divided into four sections, each a complete unit in itself in respect of *matériel* and *personnel*. Each field hospital has a distinguishing number, and the four sections are designated by letters above the field hospital number. Great care has been bestowed upon the provision, arrangement, and packing of stores, medical comforts and medical and surgical appliances, in order to adapt them practically to the requirements of field service. The entire *personnel* of a British field hospital, from the surgeon-major in charge to the junior tent lascar, consists, inclusively of muleteers, of 294 persons. The latest Medical Department Code for field service in India is generally supposed to be very good and complete. The *Pioneer Mail* of April 18th has a communication descriptive of some of these hospitals, which are termed "model field hospitals," as they left Meerut for service with the Chitral relief force.

VOLUNTEER MEDICAL ASSOCIATION.

The annual mess dinner of this association was held at Limmer's Hotel on Wednesday, April 24th, and a large party of members and guests sat down under the chairmanship of Surgeon-General Don, who presided in the absence of Sir Guyer Hunter. In the various speeches reference was made to the work which had been done by the association, and of the necessity for its support by all volunteer medical officers. It was pointed out that this was the only organisation through which representations could be made to the authorities regarding the objects in which its members were interested. The arrangements for the dinner were admirably carried out by the mess committee and the hon. secretaries, Surgeon-Captain Dundas Grant and Surgeon-Lieutenant A. Eddowes.

THE SMALL POX OUTBREAK AT CALCUTTA.

According to the latest intelligence from India small-pox is still very prevalent at Calcutta. The epidemic appears to be of a severe character and to have given rise to a good deal of mortality. An enormous number of natives and others have been vaccinated or revaccinated since the disease made its appearance in Calcutta, and the able and energetic public health officer of that city, Dr. Simpson, has been very actively employed in devising and carrying out arrangements in this and other respects for checking the spread of the disease. There has also been a good deal of cholera of late in Calcutta.

THE DEFENCE OF CHITRAL.

Our readers, in common with the rest of the public, will be glad to learn that the Secretary of State for India in Council has sanctioned the recommendation of the Government of India to grant six months' pay to all ranks of the garrison in recognition of their splendid defence of Chitral Fort. We congratulate all concerned, and especially Surgeon-Major Robertson and Surgeon-Captain Whitchurch on the distinguished part which they played throughout the siege, and have no doubt that both these officers will receive some further recognition of the conspicuous services they have rendered.

Correspondence.

"Audi alteram partem."

"MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS."

To the Editors of THE LANCET.

SIRS,—Mr. Sharp, in his letter in THE LANCET of May 4th, has courteously disclaimed any intention on the part of the School Board to put a slight upon the medical profession by the appointment of scrutineers of medical certificates which are considered doubtful or unsatisfactory by the Board. Yet the results of the Board's action cannot but belie its intentions. The majority of such certificates are filled up *gratuitously* by medical men who act in perfect good faith and with every consideration for the welfare of children, parents, and schools, for they can have no motive for acting otherwise. Mr. Sharp denies that certificates are given as an act of courtesy to the Board. "On the contrary," he says, "they are procured by the parents as evidence of the child's inability to attend school." How procured, he does not apparently inquire. As a matter of fact, the burden of filling them up in large quantities falls chiefly on hospital medical officers, for the same class of children attend Board schools and hospitals alike. The certificates are sent by the Board's officers through the parents to the medical attendant, with a direct request that he will fill them up, or the parents will be summoned and fined. It is, of course, open to the medical man to refuse to do so, and to offer to give evidence on the parents' behalf should a summons be issued. But the poor parent at once objects that even if he escape a fine he will lose a day's work by having to attend the Police-court, and the medical man shares the latter objection. So he endeavours to save the child from possible injury from enforced schooling, the parents from unjust prosecution, and himself from further trouble by giving a certificate. In doing so he also supplies the Board with gratuitous information which it has no legal right to demand. He thus saves the Board from undertaking actions which, were he to give evidence in court, it would entirely lose. Hence, giving a certificate instead of attending to give evidence in court is distinctly an act of courtesy to the Board. It seems therefore a little ungracious of the Board to first exert indirect pressure on medical men to do unpaid work for it, and then to question the value of the work done. The main reasons alleged for these new appointments are that "medical certificates are frequently presented which are unsatisfactory either on account of the vagueness of the terms used, or of a doubt as to the seriousness of the malady from which the child was alleged to be suffering." Whatever opinion the School Board may form on these points, it seems only right that the opinion of a medical man that a child is unfit for school should be respected; at all events, reference should be made to him if the Board is in doubt. The Board, however, thinks otherwise, for quite recently the parents of a boy, who has been under my care for many weeks as an out-patient and for whom I gave a certificate of unfitness to attend school, have been summoned and fined at the Clerkenwell Police-court for not sending him to school. My certificate was rejected by Board and magistrate. I was not called upon to give evidence. The result of such high-handed proceedings by the Board can only be that medical men will absolutely refuse to give

certificates, finding their labour thrown away. The new appointments by the Board will, therefore, become sinecures. It will, however, cause constant chagrin and vexation to medical men to find that their efforts to serve children, parents, and schools are so ill appreciated by the Board. After all, the Board should know that medical men are its best friends. All will agree with Mr. Sharp that the school attendance of a child is by no means a "trivial matter," but one of "vital importance, not merely to the future welfare of the child, but also indirectly to the community generally," especially, I would add, when the child is medically unfit to attend. And of this who are to be the judges?

I am, Sirs, yours faithfully,

LEONARD G. GUTHRIE.

Upper Berkeley-street, W., May 6th, 1895.

"MEDICAL EVIDENCE AT INQUESTS."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 4th I notice a communication on the above subject. In an editorial note to Mr. Milligan's explanation you state your opinion "that it would have been advisable to take the evidence of the medical man who first saw the wound." This seems so obvious that one wonders that it is not the universal practice. I can give a case in point. Some time ago I was called to see a man who had been shot. He lived close to my house, so that I was able to attend within a few minutes of the accident. I found the man lying on the floor, with blood spurting from a wound in the neck. As the patient was rapidly bleeding to death, I placed my finger on the wound, and so stopped the flow of blood. Having sent for the ambulance, the man was conveyed to hospital, when the hæmorrhage was found to have ceased, owing no doubt to the fact that I had kept my finger firmly applied to the wound during the whole time since I first saw him. I may state that the patient made an incriminating statement to me against a youth who had fired the shot, saying that it was done intentionally. The youth was afterwards tried for murder and acquitted, there being no evidence to prove that the occurrence was not purely accidental. After making the statement to me the patient never spoke again. He died a few hours afterwards in hospital. The police whom I sent for carefully took my name and address, and that was the last I heard of the matter. The divisional surgeon, who had never seen the man at all until he saw him in the mortuary, was called at the trial, though what value his evidence could have it would be difficult to say. Had I waited until the police sent for me to attend the man would have been dead, but I should have had a fee. As I attended first and sent for the police myself I saved the patient's life for the moment, but received no fee. Although I am satisfied that in this case the wounding was accidental, it is not difficult to imagine that there might have been a grave miscarriage of justice.

I am, Sirs, yours faithfully,

Holloway-road, N., May 6th, 1895. W. A. MALCOLM.

"THE LONDON AND MANCHESTER INDUSTRIAL ASSURANCE COMPANY, LIMITED."

To the Editors of THE LANCET.

SIRS,—In reference to Mr. Dunlop's letter in THE LANCET of May 4th, it would be as well, perhaps, to remove the impression made by it—viz., that medical men are likely to receive even the utterly inadequate rate of 8½*d.* for each bottle of medicine supplied by them to club patients—by stating at once that, far from receiving 8½*d.*, the most they can expect to receive is *3d. a bottle.* I have been myself for many years connected with a club whose rate of pay to their medical officers is practically the same as that of the London and Manchester Industrial Assurance Company, and the average amount per bottle received by me over a period of ten years, compiled from accurate statistics kept by my assistant, came to something less than *3d.* a bottle. It is true that last year—the year on which Mr. Dunlop's estimate is based—I too received about *9d.* a bottle on an average from my club patients, but that was because (owing to the unusual character of the season) I had, in common with so many medical men in all parts of London, only one-third of the usual number of patients requiring attendance—a condition of things not likely to be permanent, and on which, therefore, it would be dangerous on any matter of moment to base calculations for the future.

I am, Sirs, yours truly,

JOHN BEATTIE CROZIER, M.B., L.R.C.P.

Elgin-avenue, W., May 8th, 1895.

"IRRIGATION AND CLIMATE."

To the Editors of THE LANCET.

SIRS,—In this week's issue of THE LANCET there are some remarks on the effect of irrigation upon the climate of Egypt which raise a question of real interest. Has the climate of Lower Egypt become much damper than it used to be? The answer must be undoubtedly in the affirmative. I was in Cairo for the first time in the winter of 1850, and have been there three times since during the last five or six years. At the former period rain was so rare an occurrence that people gazed at it as at a remarkable phenomenon. During the latter period boats have been actually used at times in the streets of Cairo at periods of heavy rains. These are the facts, and it is probably not difficult to suggest the causes.

I am, Sirs, yours faithfully,

W. H. HALLIDAY.

Oxford and Cambridge Club, Pall Mall, S.W., May 4th, 1895.

"STERILISATION OF MILK."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of April 20th Dr. Carter, in an able article, calls attention to the vital importance, especially during the summer months, of preparing milk for home consumption which shall agree perfectly with infants and with dyspeptic adults, and which yet shall be neither raw nor boiled. Though he does not say so in so many words, the chief practical advantage of sterilised milk over boiled milk is that it does not cause the constipation usually complained of when mothers are compelled to boil the children's food. I may mention that in some Oriental countries milk is regarded as a mild aperient merely because it is the custom of the natives to drink it when no longer fresh. Dr. Carter commends the adoption of a sterilising machine which sounds desirable in many ways. It is apparently a modification of Professor Soxhlet's sterilising apparatus for milk, which is too little known to English practitioners. This apparatus was brought out in Munich in 1886, and has since then been in constant use in Germany. It has been employed in Egypt for more than three years, and after using it for my own children and for patients I can confidently recommend it as being simple, portable, certain, and inexpensive. (The London agent is Mr. Pearl, 4, Bury-court, St. Mary-axe.) Dr. Carter proposes that the milk-bottles shall be closed with cotton-wool, but the Soxhlet system of providing indiarubber corks, which are sucked into the neck of the bottle during the heating process, is perhaps better. The milk will then keep sweet for several weeks in the corked bottles. The best kind of cork has been invented by Professor Stutzer, and can be obtained from Messrs. Ollendorff-Wilden of Bonn. In order to preserve milk in larger quantities, as in dairies or hospitals, nothing will be found to act much better than an apparatus originally made for breweries, and introduced some three years ago into the Kasr el Aini Hospital by the medical superintendent, Mr. Milton. Formerly it was impossible to keep milk during the summer nights, but now there are no further complaints, and it is even found that the milk will keep for three days in vessels covered by muslin only, provided that the vessels also are previously sterilised. By this machine, made by Messrs. Lawrence and Co. of London, every morning more than 100 pints of hospital milk are rendered innocuous for future consumption in less than fifteen minutes by heating the milk by steam and then rapidly cooling it again.

I am, Sirs, yours faithfully,

Cairo, May 1st, 1895. F. M. SANDWITH, M.D.

"THE TITLE OF 'DOCTOR.'"

To the Editors of THE LANCET.

SIRS,—Mr. Sewill has hit the nail on the head. The medical profession require two things most urgently: first, that the Medical Acts shall be so amended as to make it a penal offence for persons to *practise* any branch of medicine

or surgery, the penalties to be increased substantially for second and third breaches of the Act; and, secondly, a public body or a public officer whose duty it shall be to enforce the provisions of the Act. It is mere waste of time to attempt to draw up a penal clause and endeavour to embrace in it all the titles at present assumed by unqualified men. As soon as the list of titles was drawn up men would invent fresh titles and would continue to practise with impunity. A movement is on foot to ask the British Medical Association to spend a portion of its surplus income in the suppression of quackery; and in the opinion of many thoughtful men such a movement would be likely to prove successful. It is also worth much consideration as to whether the mature experience (as Mr. Victor Horsley suggested in his annual address) of the Medical Defence Union could not be utilised for such an important work. At the present moment what is most required is the focussing of the opinion of the profession on these vital points; and I sincerely hope that ere long an opportunity will be given to those who have taken an interest in them to confer together and if possible draw up a scheme for presentation to the members of the profession.

I am, Sirs, faithfully yours,

Cardiff, April 29th, 1895. T. GARRETT HORDER.

To the Editors of THE LANCET.

SIRS,—There is a fact which seems to have been overlooked which I venture to think cuts the ground entirely from under Dr. Campbell Black's feet. It is that the Society of Apothecaries successfully claims for its Licentiates the legal right to style themselves Doctor. This being so, Dr. Campbell Black's contention that the coveted title belongs only to men who have taken the University degree of Doctor falls to the ground, and with it, it seems to me, ought to fall his protests. For it is manifestly absurd to deny to (e.g.) the M.R.C.S., L.R.C.P. a title which is accorded to the certainly not superior L.S.A. For my part I should be in perfect sympathy with Dr. Campbell Black's desire to limit the title to the *bonâ fide* M.D., were the opportunity of acquiring that degree given, as it should be, to every duly qualified man. But under existing conditions, while I intend never to assume the title, I shall yet always expect to receive it, at least from my patients, and shall certainly feel no resentment towards those who, perhaps more logical and more courageous, do assume it. Sauce for the goose should be sauce for the gander; and while the L.S.A. takes the title as his right, and the M.B. of every recognised University, however mediocre, receives it, even in the pages of THE LANCET, "by courtesy," it is ridiculous to expect the diplomate of a College of Physicians to abstain from endeavouring to minimise so glaring an injustice. He uses the title, therefore, and establishes an impregnable defence by appealing to immemorial custom and the universally received interpretation of the word physician.

I am, Sirs, yours faithfully,

May 3rd, 1895. PALMAM QUI MERUIT.

To the Editors of THE LANCET.

SIRS,—Dr. Campbell Black evidently has to encounter some rather subtle logicians upon what, after all, should appear a most simple question, and it is one which threatens to drift into a question rather of etymological than of practical importance. If, however, Dr. Black sticks to his big gun—that is, as he states, that "a doctorate is a University degree"—no collateral issues, such, for instance, as the distinction between a doctor and a physician, can touch the point, as we have nothing whatever to do with these considerations. Nothing can alter the fact that a University degree confers the title of "doctor," whereas a licentiate or otherwise does not. It has been attempted in some quarters to point out that a large number of the medical corporations address their diplomates as "doctor," and that medical men address one another as such, and, further, that the public use the term in a general sense. None of these considerations, moreover, touch the point. The real question is, Has a non-graduate any right *to dub himself* "doctor"? He is clearly not responsible for what others do. The writer remembers many years ago a commoner who, upon being driven to a dinner party in a cab, was addressed by the cabman as "My Lord," the cabman presumably thinking his fare, who happened to be a person of aristocratic appearance and demeanour, must be a nobleman. Surely nobody could contend on this ground that the fare would be entitled to announce himself thus. By parity of reasoning non-graduates have no claim to dub themselves "doctor" on brass or otherwise, whatever others may do for them. If it is otherwise, University degrees, so far as the title is concerned, are absolutely null and void—in other words, they are useless, which is obviously unfair to those who have gone to the expense and trouble of obtaining them, and probably more with the object of obtaining a title than anything else. I am, Sirs, yours, &c.,

London, May 4th, 1895. L.R.C.P. EDIN.

*** This correspondence must now cease.—ED. L.

"PUBLIC AND PRIVATE VACCINATION."

To the Editors of THE LANCET.

SIRS,—I fully endorse the complaint of several of your contributors who are public vaccinators, that much vaccination is done insufficiently, according to the wishes of mothers, rather than, as it should be, with the sole view of safeguarding the patients from small-pox. Indeed, until the number of successful vesicles appears on the certificate, which could readily be the case, such insufficiency is sure to continue. It is a very easy remedy, and could almost at once be put into force. I tried to get this information from the registrar of my district, but he tells me that, on asking, the reply he got was the question, "What business it was of his?"

I am, Sirs, yours truly,

May 3rd, 1895. ANOTHER PUBLIC VACCINATOR.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Street Noises.

REFERRING to the annotation in last week's LANCET on Street Noises, it may be stated that in Liverpool we have for some years past possessed under a local Act very summary powers of dealing with the noises made by street musicians or singers. A householder may personally, or by a servant or police constable require a street musician to depart *beyond the hearing* of such householder, which would mean a very considerable distance. Refusal to comply with this very reasonable request subjects the musician to a fine not exceeding 40*s.* and costs, and it has been found necessary to summon some few of these pests for persisting to play in or near a street largely inhabited by members of the medical profession. In addition to the reasons suggested in the annotation why a licence should be required of these gentry, another might be added—the large earnings acquired by them. Whether it be honestly earned, or be more correctly blackmail, it is no secret that the amount earned by the owner of a piano-organ is very large. A large number of medical practitioners reside within short distances of various churches whose monotonous bells tolling for nearly half an hour are a terrible infliction. But the most cruel of all pests is the ringing of changes on a peal of bells at a late hour in the evening, the clashing and clanging being incessant for, it may be, two hours. It is no consolation to the physician or surgeon, who has been trying to listen to patients, to read, or to write during this period, to learn that it was "a true peal of grandsire caters which came round in two hours and thirty-seven minutes." If change-ringing and practice be desirable, might it not be done, say, on Saturday afternoon, when the annoyance would be less?

The Assizes.

Mr. Justice Hawkins is presiding in the Crown Court at the present assizes. The calendar contains the names of forty-four prisoners. Among these, one is charged with murder, one with manslaughter, and one with shooting with intent. Several women are charged with a serious assault on a boy twelve years of age because he gave evidence at the last assize against a prisoner for maliciously wounding a woman. He was so seriously hurt that he had to be taken to the Royal Infirmary. Quite apart from the nature of the injury, assaulting or even intimidating a witness is a very grave offence.

Gift of a New Park.

Another fine breathing-place has been presented to this city by an anonymous donor. It takes the form of a park, situated at Wavertree, an eastern suburb of Liverpool, noted as the residence of the poetess, Felicia Hemans. The value

of the gift, which is of considerable extent, is stated to be over £80,000. Such gifts are, however, invaluable.

May 8th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

The Infirmary Site, Newcastle-upon-Tyne.

By a large majority—33 to 10—Mr. Alderman Henry Newton's motion that the corporation should grant the infirmary governor's request to build a new hospital on a portion of the town moor, on the condition that an equal area should be added to the moor, has been negatived. It is believed that the action of the town council fairly represents the feeling of the citizens, and the objections against building upon any part of the moor is undoubtedly a strong one. It will occur to many, however, that if by placing the Leazes site at the disposal of the infirmary committee the area of the moor would not have been curtailed, the strongest reason for not granting the request of the infirmary committee was satisfactorily met. The Royal Infirmary is undoubtedly in a strait; its present accommodation is inadequate and it would be exceedingly difficult to build upon the present site such a hospital as is required. The staff would be content to remain where they are, in the very centre of the town, if additional land could be procured, but hitherto this has been found impossible. It is doubtful whether the corporation would be willing to curtail the scope of the cattle market for the benefit of the infirmary even if they had the power to do so, and in no other direction can the present site be added to.

New Charter for the University of Durham.

It is understood that the petition of the University to the Queen in Council has been granted and that a new Charter is about to be given. If this should be true the University will then be able to grant degrees to women in all the faculties with the exception of theology. Why women should not be encourged to study theology is a little difficult to understand. It cannot be because the fair sex are not interested in the subject, for the majority of almost every Church of England congregation consists of women—perhaps the reason is a fear that if they studied the subject more closely they might become lip devout—that would be a pity. No man would be worse because a woman was a D.D., neither would any woman suffer because a deaconess, for example, was certified to be a person learned in Divinity.

The Dean of Durham, the Very Reverend Dr. Kitchin, is better, and everyone with whom he has been brought in contact since he arrived in the North is delighted to hear it.

Small-pox at South Shields.

The Tyne port sanitary authority has ordered proceedings to be taken against the master of the ss. *Burham* for allowing a man to leave the vessel on its arrival in the Tyne last Thursday without reporting that he was ill. The occurrence came to the knowledge of an inspector, who traced the man, found that he was suffering from small-pox, and had him promptly sent into hospital. The Tyne port sanitary authority has also determined to ask for a Government inquiry into the alleged introduction of small-pox into South Shields and the neighbouring borough of Jarrow from an admittedly infected ship, the *Regulus*. If this inquiry should be granted, as in all probability it will be, several questions of interest will arise, and among them not the least important will be the powers possessed by the medical officers to deprive sailors of their clothes for the purpose of disinfection, as to which there seems at present to be some difference of opinion.

Newcastle-upon-Tyne, May 7th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the Summer Session in Edinburgh.

THE summer session of the medical classes opened on Wednesday, May 1st. There was no opening address or ceremony of any kind at any of the various lecturing places in the school, with the exception of that over which Miss Jex Blake presides. She usually has a little opening and closing ceremony. There has been an unusual number of fresh entrants at the College for Women in Chambers-street, over which the Scottish Association for the Medical Education of Women presides. At the classes generally, it is too soon to say how they are to be attended.

The Edinburgh Medico-Chirurgical Society.

This society met on Wednesday of last week; but it was evident that the holiday spirit which has pervaded the profession for the past month had not passed away. At all events the meeting was very poorly attended; in fact, the society does not appear to have recovered from the exhaustion following upon the effort it made at the time of the discussion on cardiac therapeutics. In addition to a number of interesting cases which were shown, Dr. Russell read a short paper in which he advocated draining the gall-bladder for the relief of jaundice, even when due to obstruction from malignant disease.—Dr. Leith read a long paper on an interesting case of Pulmonary Tuberculosis in which bacilli were present in quite unusual numbers, with no other signs.

Aberdeen University.

An important stage in the extension of Aberdeen University will be reached in October next, when the Mitchell Graduation Hall and Students' Union will be formally inaugurated. The event will be celebrated by interesting ceremonials and festivities prolonged over five days. On Oct. 22nd Dr. Charles Mitchell, the donor of the Graduation Hall and Students' Union, will be presented with the freedom of the city in recognition of his munificent contribution in aid of the University extension scheme. On the following day he will hand over the Students' Union Buildings, and will receive an illuminated address from the students. On Oct. 24th the Marquis of Huntly will deliver his rectorial address. On Oct. 25th Dr. Mitchell will be presented by the Senatus with an address and a gold medal, and the day being the anniversary of the death of Bishop Elphinstone, founder of the University, that prelate's memory will be honoured by a commemorative service held in Oldmachar Cathedral.

May 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Surgeons.

PURSUANT to the provisions of the Supplemental Charter, the election for examiners under the new regulations took place on the 7th inst., when the following Fellows of the College were elected to examine for Fellowship and on the various Courts:—In Anatomy, Dr. Burton and Dr. Myles; in Surgery, Sir Wm. Stokes and Mr. Chance; in Physiology, Dr. Coppinger and Dr. Scott; in Biology, Dr. Patteson and Dr. Scott; in Pathology, Mr. Burgess and Dr. Patteson.

Queen's College, Belfast.

In introducing Dr. Lorrain Smith, the President of Queen's College pointed out that, so far, they had only a lectureship on pathology, and having drawn attention to what had been done at Cambridge, Aberdeen, and Liverpool, he hoped that some public-spirited man would do for Belfast and the North of Ireland in the matter of pathology what Mr. R. G. Dunville and the Sorella Trustees did for physiology, when they founded a year or two ago the Dunville Professorship in that subject. The President stated that next session, when the class in pathology would assemble, he expected it would be in the new buildings which were about to be started. The Government erect the building, but the president has been obliged to undertake to raise the funds (which, in the first instance, will mean an expenditure of £1000) for providing the requisite fittings and apparatus. It is to be hoped that Dr. Hamilton, the president of the college, who since his appointment has done so much for this institution, will have little trouble in raising the money.

The Address on Pathology at Queen's College, Belfast.

On May 1st the summer session began, and Dr. J. Lorrain Smith, who has recently been appointed lecturer, gave his introductory address on Pathology. He spoke of the increasing number of studies which students have now to undertake. The place of pathology was midway between the biological sciences and the student's strictly medical work. It thus had the function of bringing medicine into connexion with the best work in any of the biological sciences.

Dr. Lorrain Smith then dealt with the three departments of pathology—that is, morbid anatomy, experimental pathology, and bacteriology. To morbid anatomy has been given a distinctly biological form by Virchow, the founder of cellular pathology. It still is one of the most vital parts of the whole science, and is the one which could be at present taught with most profit to the student. The lecturer then referred to one or two lines of investigation in which pathology was at the present time actually profiting by the application to its problems of the most recent discoveries in regard to cell structure and cell division. Reference was made at some length to the position which experimental pathology should occupy in the science as a whole. It was, he thought, unreasonable to restrict the examination of a case of disease to the investigation of the tissues by the microscope, and especially so when those tissues had been obtained post mortem. It was the duty of the science to take up the problem from the commencement of the disease. This, by the aid of physiological methods, experimental pathology was now doing. This department of the science, however, was the most trying, and the one which required on the part of students an extensive acquaintance with physiology before they could make use of it. Dr. Lorrain Smith concluded with a short reference to bacteriology as follows: "It hardly seems necessary for me to speak of bacteriology to you, because you must all be acquainted with many of the results which have been obtained by this department of the science. The praises of it are in the mouths of everyone. It has wrought changes in medicine and surgery, in other branches of pathology, in public health, and in the management of many trades and industries. It is impossible in these days to be a good citizen without some knowledge of bacteriology. The brewing of ale is not to be trusted to anyone who is not an expert in making pure cultivations of the mixed organisms which cause fermentation. It may be that we are becoming too scientific, for it has been whispered that medicine is advancing so rapidly that it is lowering the average physical ability of the race by preserving many of those who in the barbaric ages of the past would have succumbed to all-pervading bacteria. Perhaps a more subtle criticism even than this of our too much science is that which comes from the countries of scientific ale-brewing. The men there who over their tankards remember the days before the organisms of fermentation had been isolated in pure cultivations are fain to admit that now the ale is never brewed with the wrong microorganism; but, alas, their symposia are dulled by the monotonous uniformity of this pure cultivation product. They never reach the height of the great ales which were occasionally produced for them in the pre-scientific days, and which lent a lustre to their lives which is never to be forgotten. The popularity of the science is due, however, not only to the somewhat steady operation of its results, but also to the fact that it has enormously extended the utility of other branches of medical science. It has put in our hands the cause of many acute diseases, and enabled us to deal with them in a preventive manner. It has radically changed many methods of treatment in both surgery and medicine, and if many of its upholders are not mistaken we are about to have in serum therapeutics a method not only for the prevention of disease but also for the cure of it after the attack has begun. Every year introduces us to large and important developments of the science. For example, how much has the study and treatment of diphtheria been quickened by the recent work of Behring and Roux? Here, even if the therapeutics fail to do all that has been promised, the mere aid to diagnosis which bacteriological methods afford is certain to be of the greatest value in the work of the profession. The direct gain to the practice of medicine will yearly and yearly become greater. Even at the present day bacteriology has, by its contributions to professional knowledge, taken such a place that it is really impossible for anyone who wishes to train himself fully for his life's work to allow the opportunities for learning it to escape him. In the earlier part of this address I alluded to the feeling of oppression which the student sometimes experiences, and perhaps what I have been saying has tended in your case to increase rather than to remove it; if so, it is because what one has to say at the beginning of a course in pathology is really what would probably be much more appropriately said at the end of it. To speak of general principles without a background of detail is a habit which in science we are taught to avoid. What I have attempted to do, however, is to give you some idea of what you ought to-day to learn from pathology if it is your wish to give it your attention. You will find that the mass of detail simplifies itself. The acquaintance with the prevailing conception of the science takes a sort of personal character, and becomes in the end an acquaintance with schools and the men who founded them."

Inspection of Rural Slaughter-houses, Belfast.

The city council at their last meeting very wisely decided to allow one or more of their officers to be appointed by the board of guardians, with a small addition to be made to their salaries, to inspect the carcases of animals slaughtered outside the city boundary and sold for the food of man. Those slaughtered within the city are inspected by the council's officers.

Oil-lamp Accidents in Belfast.

The woman to whose case I referred in the last issue of THE LANCET has since died, this being the fifth death in connexion with lamp accidents in Belfast within seven days, four being due to explosions and one to a lamp being overturned and setting fire to the deceased's clothes. It seems that three kinds of oil are used in lamps—Scotch, Russian, and American. It is mostly through the use of American oil that explosions occur, the reason being that it has a very low flash or explosive point. In Scotch oil the flash point is 100°, in Russian oil 86°, while in American oil it is only 76°, which makes a very material difference. In America the oil could not be sold under a flash point of 100°, while in this country it can be sold at 73°. It is evident that the Select Committee appointed by the House of Commons, and which partially reported in 1894, should be reappointed to take further evidence and to report on this important question. At the inquest held on the last victim of oil-lamp explosions on May 1st, the jury added the following rider to their verdict: "That the coroner be requested to call the attention of the Parliamentary members of Belfast, Antrim, and Down to the number of fatal accidents which have taken place in this city (Belfast) and elsewhere from explosions of oil-lamps, and to request them to urge upon the Government the reappointment of the Select Committee on Petroleum, as desired by that committee, and reported to the House on the 29th April, 1894, and that legislative steps be taken at the earliest possible moment to prevent the sale of unsafe lamps and low-standard oil."

Statistics of Public Health.

I regret to say that in the table showing the births and deaths registered during the week ending April 27th there is a very high rate of mortality in Irish towns. Thus in Lurgan it was 50·2 per 1000, in Galway 52·9, while in Sligo it reached the abnormal height of 55·8. In Drogheda it was 39·5, while in Belfast, Newry, and Waterford it exceeded 32 per 1000. In the sixteen Irish towns recorded the average death-rate was 30·3 per 1000, while, on the other hand, in England and Wales the returns for the week over the thirty-three great towns in the Registrar-General's record showed that the average mortality per 1000 was only 18·9, as compared with the Irish 30·3. It is certainly a subject for consideration and reflection why the death-rate in the sixteen most considerable Irish towns should exceed that in the thirty-three English towns by something like a proportion (speaking roughly) of 11 to 7, and why in three Irish towns the death-rate per 1000 should come up to or exceed 50 per 1000—a terrible mortality.

Ulster Medical Society.

At a meeting of the Ulster Medical Society held on May 3rd, Dr. McCaw gave details of a case of Premature Labour presenting some unusual features. Mr. Kerin read notes of a series of cases of Pelvic Abscess. Dr. R. Thomson gave an account of a case of Auto-abdominal Section attended by himself and Mr. James McCullough. It seems that a woman over seventy years of age had been for some time troubled with a swelling on the left side of the abdomen, which she wished to have removed, but which was not believed to be the cause of her complaints. She was so convinced that it should be removed that she decided to do so herself. Standing over a basin she, with a pair of scissors, cut down on and removed the tumour, and, in doing so, opened the abdominal cavity and wounded part of the mesentery. When Mr. McCullough and Dr. Thomson were summoned a portion of the intestine was protruding. This they returned and carefully united the abdominal wound, and the patient made a good recovery. The tumour, which was about the size of the closed fist, was a fatty one,

and was probably in the abdominal wall, but in removing it she had opened the peritoneum. Specimens were shown at the meeting by Dr. Campbell, Dr. Thomson, and Dr. Lynass.

Dispensary Appointment.

At a meeting of the Belfast Dispensary Committee held on May 6th Dr. Robb was elected dispensary medical officer for the Springfield District (No. 9) in place of the late Dr. Jamison, whose death from typhus fever, contracted while in the discharge of his duties, I chronicled in THE LANCET of April 6th. The monthly report submitted by the medical officers showed that, owing doubtless to the improvement in the weather, the health of the inhabitants had greatly improved since the previous month.

The Cork North Infirmary.

The trustees of the North Infirmary have issued their annual report. They state that the new Gibbons Wing is nearly completed and will soon be formally opened. The late Lady Combermere was a near relative of a Dr. Gibbons, who was formerly on the staff of the hospital, and her ladyship recently bequeathed the munificent sum of £25,000 for the building of an addition to the infirmary to be called the Gibbons Wing. The trustees point out that though they have been obliged to maintain an increased number of patients during the year their subscription list is not as large as it might be. On the other hand, they were fortunate in receiving in legacies a much larger sum than usual. They are about to make an important departure with regard to the nursing of the hospital. Heretofore the hospital has been nursed by the sisters of charity, but in future the services of the sisters are to be supplemented by those of lay trained nurses and probationers. A nursing home will be established in connexion with the infirmary and nurses supplied to the general public. The medical and surgical staffs are thanked by the trustees in most graceful terms for the manner in which they discharged their duties during the year.

Poisoned by eating Mushrooms (?).

A very sad fatality has occurred in Cork. Two little boys, Denis Sheehan aged eight and John Mahony aged nine, went into the country last Wednesday with some other children for a day's amusement. About half-past four o'clock in the afternoon some fungi called "sheep's puffs" were found, and the little fellows had a general scramble for them, believing them to be mushrooms. One of the elder boys present warned his companions of the poisonous nature of the fungi and recommended them strongly not to eat them. Unfortunately his advice was not taken, and the two lads named became very ill about three hours later. Diarrhœa and vomiting set in and the two poor children died, the elder on Saturday night and the younger the following day, Sunday. An inquest was held, and a post-mortem examination revealed indications of irritant poisoning. An intelligent boy seven years old was questioned by the coroner, and in reply stated that he saw the other children eating the supposed mushrooms. He also mentioned that he himself ate "a good couple," and was unwell for the evening. All present in court were glad to see that the little chap was "alive to tell the tale."

Appointment of Professor of Modern Languages in Queen's College, Cork.

Mr. William F. T. Butler, B.A., has been appointed to the chair of Modern Languages in Queen's College, Cork. Mr. Butler is a son of Captain Butler, R.M., Cork. He was educated at the Catholic University College, Stephen's Green, Dublin, and had a most distinguished career. He graduated at the Royal University in 1891, and last year won the Travelling Studentship in Modern Literature. It is believed that his appointment to the chair in Queen's College will meet with general approbation in educational circles.

Another Boating Accident in the North.

Following closely on the disaster by which eight lives were lost by the capsizing of a boat near Mountstewart, another accident is reported to-day (the 7th inst.) by which two ladies and a gentleman were drowned. Mr. Woodhouse, of Preston, Lancashire, with his wife, son, daughter, and niece, went out yesterday from Portrush, accompanied by two boatmen. Their boat was overturned off the White Rocks, with the lamentable result which has been reported.

Payment of Medical Officers.

The Local Government Board has been forced to reconsider its decision in the case of Mr. Cahalan of Nenagh, as will be seen from the following extract from the Parliamentary Reports for the 25th ult.: "Payment of Medical Officers.—Mr. John Morley informed Mr. William Redmond that in the case of Mr. M. J. Cahalan, medical officer to the Nenagh Board of Guardians, who had been called on to attend four urgent cases in the absence of any other medical officer, and whose fees had been stopped by the Local Government Board on the plea that over seventeen years ago he was dismissed for refusal to prosecute poor patients under the Vaccination Acts, the board had reconsidered the matter and had authorised payment for the temporary services rendered."

Limerick City Dispensary.

The recent contest for the vacant dispensary in Limerick caused considerable excitement, not only among the numerous candidates for it, but also among the applicants for the house surgeoncy to Barrington's Hospital, which would have been rendered vacant if Mr. Mulcahy's election to the dispensary had been ratified. An objection was lodged, however, against it by the Rev. Dr. Hallanan, who stated that his name had been illegally removed from the list of the Dispensary Committee. The Local Government Board has upheld the objection and directed that a new election must take place "for a medical officer to the No. 2 Dispensary District, vacant by the resignation of Dr. Gelston." At the last election Mr. Mulcahy was victorious by 2 votes.

May 7th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Alleged Cure of two cases of Cancer by Sero-therapy.

THOSE pioneers in serum therapeutics, MM. Richet and Héricourt, brought before the notice of the Académie des Sciences on the 29th ult. the encouraging results said to have been yielded by the application of this method in the treatment of malignant disease. On Feb. 9th, 1895, M. Reclus removed an osteo-sarcoma of the leg. This tumour was crushed and mixed with a little water, and the resulting liquid, after having been filtered through linen, was employed to inoculate a donkey and two dogs. The inoculation produced no reactionary symptoms; five, seven, and fourteen days respectively later the animals were bled and the serum utilised in the treatment of the two following cases. The first was a woman for whom Professor Terrier had in October, 1894, removed a growth presenting the appearance of a fibro-sarcoma, which, having attained the size of an orange since it was first noticed (eight months earlier), was adherent to the sixth, seventh, and eighth ribs, the integuments not being involved. In February, 1895, the growth had reappeared and was as large as a hazel-nut; a month later, March 7th, it had reached the volume of a small orange. Daily doses of 3 c.c. of the serum were injected during forty days into the areolar tissue surrounding the growth. The tumour began to shrink on March 25th, and the shrinkage became more and more marked as time went on. At present all that remains of the neoplasm is an indurated *plaque* whose contour is difficult to delimit and whose volume is less than a third of the original growth. The woman's general health has, moreover, greatly improved, and she has put on flesh to an appreciable extent. The second patient was a man aged forty-four years, admitted on March 27th, under M. Reclus, into the Pitié Hospital for a tumour of the epigastric region as large as a big orange and diagnosed as cancer of the stomach. The ideas of surgical intervention having been rejected sero-therapeutic treatment was commenced on April 6th by the injection of 4 c.c. Between that date and April 24th he had received 64 c.c. An early improvement in the general condition was noticed, the body weight having increased from 57 kilos. on April 10th to 58 kilos. on the 16th and 60 kilos. on the 23rd. From April 10th the volume of the growth had diminished, and this atrophic process continued, so that ten days later the tumour could no longer, as hitherto, be felt as a projecting isolated mass. Palpation gave only the sensation of a resisting surface—a vague thickening deeply situated and difficult to circumscribe. The extraordinary success attending the treatment in this second case leads MM. Richet and Héricourt to ask, *par un excès de prudence*, if there was not an error of diagnosis. But in Professor Terrier's case there would seem to be no reasonable doubt that a sarcoma which had recurred in the same spot was, thanks to

the injections, reduced to one-third of its original size, with manifest advantage to the general health of the patient. But I imagine most clinicians would thus early hesitate to echo the jubilant note of the discoverers who proclaim that the patient is *cured*. The growth is still present, although apparently dormant. This cautious reserve does not, however, lessen our indebtedness to those two patient workers who have done so much for sero-therapy.

Latent Tuberculosis of the Tonsils.

Professor Dieulafoy calls attention[1] to a torpid variety of pharyngeal tuberculosis the favourite seat of which is the adenoid tissue of the naso-pharynx. This tuberculosis manifests its presence by an exuberant growth of the lymphoid organs of that region—in other words, by hypertrophy of one or more of the palatine and pharyngeal tonsils. This view of Professor Dieulafoy would, if confirmed, lead us to regard hypertrophy of the tonsils and adenoid growths as, in many instances, cases of tuberculous overgrowth of adenoid tissue. He bases this belief on the results of inoculations practised on guinea-pigs of fragments of enlarged tonsils and adenoid vegetations. Of sixty animals thus inoculated with tonsil tissue, eight, or 13 per cent., succumbed to generalised tuberculosis, while of thirty-five inoculated with adenoid tissue, seven, or 20 per cent., became tuberculous. In all the persons who furnished the material for inoculation (enlarged tonsils and adenoid growths) the pharyngeal tuberculosis was primary and not consecutive to the pulmonary variety. It is to be supposed that the young subjects who have enlarged tonsils &c. provide a favourable soil for the growth of the bacillus of Koch, which finds access to the adenoid culture medium either with the food, milk especially, or with the air respired (sojourn in a bacillary atmosphere). Professor Strauss of Paris has, indeed, demonstrated the presence of virulent tubercle bacilli in the nasal cavities of individuals habitually breathing the same air as phthisical patients. An open wound is not necessary for penetration, since the bacilli can find an entrance through the epithelium. In some instances the bacilli present in the adenoid tissue are, after a sojourn of months or years, destroyed by phagocytosis, which determines an indurating, fibrous process in the tonsil. In other cases, however, the bacillus finds its way into the lymphatic vessels, and enlarged submaxillary and cervical glands are the result. This lymphatic infection is often started by the occurrence of measles, scarlet fever, whooping cough, &c. This glandular tuberculosis may, in its turn, remain local, and finally end in recovery; but in other instances rapid generalisation may result. The third stage of tonsillitic tuberculosis is the spread of the process to the lungs, the bacillus reaching those organs from the cervical glands *vid* the lymphatics, thoracic duct, and the right heart. In the course of the discussion raised by this most interesting communication M. Chauveau stated that in animals fed on tuberculous matter infection may take place by inoculation of the adenoid tissue of the base of the tongue and the isthmus of the pharynx, this inoculation being proved by the swelling of the cervical and submaxillary glands. Sometimes a minute erosion explains their inoculation, but often the surface was found intact.

May 7th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Seaside Hospitals.

THE benevolent movement by which in Switzerland and Germany school-children of the less favoured classes are sent to salubrious resorts in the mountains during the holidays, so as to give them a chance of improving their condition before term begins again, has not yet its proper counterpart in Italy. If practised at all, the system has none of that all-embracing thoroughness with which (thanks in chief measure to the Empress Frederick) it has now for years been in operation north of the Alps. This much, however, Italy can justly claim, to have made an admirable beginning for the rehabilitation of rickety and scrofulous childhood by her "Ospizi Marini" (seaside hospitals). Tuscany, I believe, has the honour of initiating this movement, but nowhere in the Peninsula is it more effectively carried out than in Rome, where it has an energetic promoter in the Minister of Public Instruction, Dr. Baccelli, whose efforts for the salvation of his country's "infanti perduti" are not the least of his many titles to honour. The office of the "Pia Opera degli Ospizi Marini" is now open for the inscription of all children duly certified as labouring under rachitis or tuberculosis, from the age (for boys) of three to twelve years, and (for girls) of three to fourteen years, whose parents are too poor to provide them *motu proprio* with the indicated seaside villeggiatura; and so all through the summer these little unfortunates of the city and province will have the benefit of the physical and moral rehabilitation wrought by continuous residence at that delightful spot on the Latin shore, Porto d'Anzio—the seat of a spacious, well-appointed, and well-administered "Ospizio Marino." If Italy, having made herself "one and independent," is anxious (in D'Azeglio's memorable phrase) "to make Italians," she could not begin better than with her children, particularly those from whom the conditions of normal upbringing have been withheld. In this she has the sympathy and coöperation of all classes and professions, and of these latter the medical *par excellence*.

The Sanitary Services.

In my obituary notice of the lamented Professor Rinaldo Roseo[1] I omitted to mention that he had been for some time engaged in compiling a series of regulations for the better organisation and working of the hygienic and sanitary services of Rome, the basis of the said compilation being the special studies he had for some time been making on the subject. His unfinished labours were confided to his assessor, Signor Panizza, who, besides possessing great knowledge as an expert, was the deputy appointed by Parliament as "Relatore della Legge Sanitaria" (Reporter on the Sanitary Law). Signor Panizza has just completed the work delegated to him, and it has been sent up to the Giunta for consideration. It embraces all branches of public health, proceeding from the hygiene of foods and drinks, of dwelling-houses, streets, and thoroughfares, up to the "Assistenza Sanitaria," and concluding with a plan to bring the new regulations into complete harmony with the reconstituted sanitary offices and *personnel*. The growing needs of the Roman commune have rendered this work of hygienic reconstruction indispensable, and by the advent of next season the tourist world (that part of it which contemplates a winter's residence in the city or province) will find a new system in working order, greatly superior to what has hitherto been available either for the resident or the migratory population.

May 4th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Medical Chamber.

THE exertions of some impostors and the credulity of mankind have brought about a lowering of the dignity of the profession of medicine in Austria. The advertisements of some specialists in venereal diseases, to whom journals of repute and authority lend their space without comment, are such as to cause indignation in every self-respecting medical man. In the hope of producing some improvement the Medical Chamber at a recent meeting passed a resolution that conduct unworthy of the medical profession will be committed by whoever—(1) advertises himself in newspapers, placards, guide-books, calendars, circulars, or pamphlets, excepting advertisements in the case of commencing practice, change of address, or return after a long absence; (2) orders the publication of thanksgiving addresses by his patients; (3) recommends methods of treatment and medicines in popular publications or reports; (4) displays his address ostentatiously; and (5) pays midwives, agents, or other persons for introduction to patients.

The Medical Society.

The Medical Society has presented a petition against Paragraph 484 of the new Penal Bill, which proposes a fine of £8 in the event of failure to notify any infectious disease within the legal term. The society observes that in these cases every exertion has been made on its part to prevent the spread of infectious disease. A protest has also been published against that famous order of the Vienna magistracy, according to which medical men were obliged to

[1] Académie de Médecine, April 30th.

[1] THE LANCET, April 6th, 1895.

make a report on all persons treated by them for venereal or loathsome diseases—an order which has excited derision in foreign countries.

Sanitation in Austria.

Dr. Kusy, President of the Council of Hygiene, notes the progress of sanitation in Austria during 1883-93. The number of hospitals at the end of 1893 was 190, with 25 379 beds, against 162 hospitals with 19,731 beds in 1880. The number of lunatic asylums has also increased from 25 in 1883 to 29 in 1893. The number of medical men amounted to 8197 in 1893 against 7357 in 1883; and that of midwives to 17,819 in 1893, against 16,439 in 1883. The deaths referred to infectious diseases, which were 21 per cent. of all diseases in 1883 were 15 per cent. in 1893. Professor Stricker, in a *critique* of this report, commends the endeavours of the Council of Hygiene, but remarks that Austria has not yet obtained the complete organisation possessed by Great Britain, where even in 1873 such attention was directed to health statistics that annual reports were presented to Parliament. He referred in complimentary terms to Sir John Simon, the pioneer of English sanitary organisation.

Poisoning by Lysol.

Some two months ago a child aged three weeks, whose father had given it lysol instead of a laxative, was admitted to the Foundling Hospital suffering from paroxysms of cough and dyspnœa. The child died next day, and the post-mortem examination, made by Professor Hofmann, gave the following results. The mucous membrane of the lips was greyish and could be stripped off; the epithelium of the tongue as well as the mucous membranes of the larynx and trachea was swollen; the left lung was consolidated, violet-blue in colour, and injected with blood; the mucous membrane of the anterior part of the stomach was pale rose-coloured, whereas on the posterior part hyperæmia and intumescence were observed. Dr. Haberda, assistant to Professor Hofmann, has shown[1] that the poisonous action of lysol is due to its containing kresols. It cauterises the skin and mucous membrane, and when absorbed it affects the brain and spinal cord, producing unconsciousness, general spasms, reduction of temperature, and bleeding into the uriniferous tubules. He therefore recommends that it should be prescribed only in dilute solution.

Death of Dr. Faulhaber.

The Austrian Army Medical Staff has just sustained a heavy loss in the death of Dr. Eustach Faulhaber, Surgeon-Major and Prosector of the first Vienna Garrison Hospital. The deceased had been suffering for some two years from sarcomatosis, a disease which he had himself diagnosed at an early period. In spite of his terrible malady he took great interest in science, and remained until his death a true student. His principal works were: "On the Occurrence of Bacteria in the Kidney in Acute Infectious Diseases" and "The Variability of Coccus Pneumoniæ." In conjunction with Professor Weichselbaum he made important researches on the subject of Influenza.

A Monument to the late Professor Billroth.

A statue of the illustrious Billroth was unveiled in the Hospital Rudolfinerhaus on April 25th. Addresses were delivered by Count Wilczek and Dr. Gersuny, director of the Hospital, the latter observing in the course of his remarks that the profession of medicine will never forget the eminent operator, whose name is associated with every advance in surgery.

May 5th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Preventive Medicine.

AT the last meeting of the Imperial Society of Medicine Professor di Giovanni of the Royal University of Padone delivered a most interesting lecture on Preventive Medicine. His Excellency Dr. Zambaco Pasha, President of the society, introduced the distinguished visitor, who expressed his thanks for the invitation to lecture before the society. After a few introductory remarks Professor di Giovanni at once entered on his subject and spoke for three-quarters of an hour, holding his audience in rapt attention. The following are some of the main points of the lecture: The physician has to treat the patients and not the diseases. It is therefore necessary for him to be well acquainted with each individual case, with the constitutions of each person, and with the morbid conditions which differ from each other. The lungs, the stomach, the livers of men and children, who may have the same age and apparently the same constitution, being of the same family, may differ one from the other. The tubercle bacillus is not dangerous if the subject that has absorbed it be of a robust constitution and if he passes a regular and good life. He can overcome it by his vigorous organism. Infection only occurs in those who are predisposed to it. The same is also true of certain diseases of the liver, for which this or that cause is attributed, which, however, already exists in the patient in his normal state under the form of a small hypertrophy, which has only continued to degenerate aided by the imprudence of the patient. Therefore, instead of consulting the physician when their disease has far advanced, if patients have recourse to him when the first symptoms manifest themselves, then it might be possible to mitigate predisposition, and consequently to stop the development of the disease, with a special *régime*, hydrotherapy, exercise, &c. At the conclusion of his highly instructive and practical lecture the Italian professor made an honourable mention of the sovereign under whose reign Turkey has seen great advancements in science.

Cholera.

The cholera has almost disappeared from Constantinople and the provinces. Not more than two or three cases are recorded weekly. The epidemic has, however, made a fresh appearance in Mecca. It will be remembered that about this time last year, when cholera appeared at Constantinople, many thought the disease was imported by the pilgrims returning from Mecca. It is gratifying to know that the Turkish Government has now very wisely sent three experts charged with the duty of disinfecting the pilgrim boats &c.

May 4th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Small-pox in Melbourne.

REFERENCE was made in a previous communication[1] to the fact that the steamer *Cloncurry* arrived at Melbourne from Calcutta with small-pox on board. The patients and crew were placed in quarantine, and the ship after thorough disinfection allowed to proceed with fresh officers and crew. After being vaccinated and their effects fumigated and disinfected the officers were released. The second officer took up his residence in a boarding house in West Melbourne and on Feb. 14th gave some linen to his landlady to send to be washed. Exactly twelve days afterwards the landlady developed small-pox. She was admitted to the Melbourne Hospital before the rash developed or the nature of the disease was recognised. As soon as the diagnosis was made the patient was sent to the sanatorium at Cut-paw-paw together with the two nurses and the resident medical officer who had been in attendance. All who had come in contact with the patient—to the number of twenty-five—were vaccinated, and the health authorities were very vigorous in taking every possible precaution against the further spread of the disease, and so far with most satisfactory results. As in some of the cases the vaccination did not appear to be successful, several persons were sent to the sanatorium—fourteen in all—but subsequently to their removal the results proved to be satisfactory.

Charge against a Medical Practitioner.

Dr. Henry Marshall Fenwick of Carlton, Victoria, was charged before the Criminal Court, first with manslaughter, and secondly with performing an illegal operation. The details of the case were given in a previous communication,[2] when the accused was committed for trial. The jury returned a verdict of "not guilty" in each case.

Action for Damages against a Medical Practitioner.

In the Supreme Court, Sydney, Mr. Austin N. Cooper, F.R.C.S. Irel., of Tamworth, New South Wales, had an

[1] Wiener Klinische Wochenschrift.

[1] THE LANCET, March 16th, 1895.
[2] THE LANCET, April 20th, 1895.

action brought against him for £2000 damages for negligent and unskilful treatment of a fractured elbow-joint. The alleged want of skill consisted in the arm having been kept in rigid splints for twelve days before passive motion was commenced. The defendant stated that he kept the splints on because the joint was too inflamed to be moved and the boy could now move his arm through an angle of 45°. Drs. MacCormack, Sydney Jones, Jamieson, and S. T. Knaggs gave evidence for Mr. Cooper and stated that there was no evidence of any malpractice or negligence. Dr. Jones had examined the arm and found good union, and that the joint could be moved over 45°. Nevertheless the jury found for the plaintiff with £200 damages.

Medical Bill for New South Wales.

For many years past efforts have been made in both the Legislative Council and the Legislative Assembly of New South Wales to pass an Act for the protection of the public and the profession against medical impostors and quacks. On March 22nd the second reading of the Medical Bill was carried in the Legislative Assembly by 52 votes to 14. During the debate on the measure Sir George Dibbs made the extraordinary statement that an irregular practitioner, who had formerly been a boatswain, boasted to him that he had made a fortune of £150,000, and that it cost him from £1700 to £2000 a year to fight the Medical Bill and prevent its being passed.

Sane or Insane: a Question of Privilege.

A law case that is almost unique has just been concluded in Melbourne after lasting several weeks, and it presents several features of medical interest. The plaintiff was Mrs. Lange, who brought an action for libel against her son-in-law, Dr. Charles Bage of South Yarra, Victoria. The alleged libels were contained in two letters which Dr. Bage wrote to the plaintiff's sister and to one of her married daughters, and in which he stated his belief that the plaintiff was not in her right mind. The defendant pleaded in addition to non-publication and privilege that he was trustee for the plaintiff under her husband's will, and that upon noticing her unusual demeanour towards her friends, her strange manner and eccentricities, and peculiar statements, he conveyed the facts, as it was his duty to do, to her sister and daughter, as they were interested in and entitled to be informed and consulted about the plaintiff's mental condition. Dr. Bage in the witness-box detailed the circumstances which led him to doubt Mrs. Lange's sanity, and read extracts from her letters, in which she said that there were machinations of the tutors and masters at Balliol College, Oxford, to prevent her son's success there, but "he is clad in armour and ready to meet all their devices to injure him." Dr. Fishbourne, a lunacy expert, gave evidence that in his opinion Mrs. Lange was suffering from "persecution mania." Several witnesses corroborated Dr. Bage's statement as to Mrs. Lange's behaviour. Then Mrs. Lange appeared in the box and point-blank denied everything said about her and explained that her written statements were not intended to be taken literally. Her son, daughter, and sister corroborated her evidence. The judge in summing up pointed out that Dr. Bage had nothing to gain by his action, that there was a point-blank contradiction in the evidence, but that Dr. Bage's statements were corroborated by written statements in many cases. Nevertheless the jury brought in a verdict for the plaintiff with damages of £750. Much sympathy is felt for Dr. Bage by the profession in Melbourne.

Annual Meeting of the Prince Alfred Hospital, Sydney.

From the reports presented to the annual meeting of the governors and subscribers to the Prince Alfred Hospital it appeared that the income for the past year amounted to £15,092, and the expenditure to £15,213. There had been a falling off in the subscriptions and donations of £392 and in the contributions from patients of £434. The statistics of the hospital showed that 2927 patients had been under treatment; 787 were cases of accident and urgency, 1043 were received under Government vouchers, and 901 contributed more or less to the cost of their maintenance. The average daily number of in-patients was 194, the rate of mortality was 9·74 per 1000, and the cost per bed was £69 13*s.* 3*d.* Attention was called to the marked increase in the number of cases of typhoid fever admitted, being 161 as against 82 the previous year.

Abdominal Surgery.

At the last meeting of the Victorian Branch of the British Medical Association Dr. M. A. O'Sullivan read some notes on Fifty Cases of Abdominal Section. He insists on the importance in cases of salpingitis of treating the uterus as well as removing the tubes, and that it is owing to neglect of curettage and other measures before or after abdominal section, according to circumstances, that so many women remain invalided after their tubes and ovaries have been removed. He also advises that the pedicle in such cases should be freely cauterised with Paquelin's thermo-cautery to prevent infection of the peritoneum, and approves of sero-fibrous union of the incision, as advocated by Greig Smith. Eight of his cases were for fibro-myoma of the uterus, for which condition he very strongly advocates the intra-peritoneal operation, his results with which have been very satisfactory. He endorsed Lawson Tait's dictum against "tinkering" with soft œdematous myoma, and narrated a case in which he removed the ovaries for this condition, and the tumour sloughed, with a nearly fatal result.—At the same meeting Mr. R. A. Stirling read notes of a successful case of Enterectomy. The patient had a strangulated inguinal hernia for three days, and travelled 120 miles on a goods train from the country before being seen by a surgeon. The small intestine was found to be gangrenous, and four and a half inches were resected. No button or bobbin was used, but a double row of forty Lembert's sutures was inserted. The bowel was returned, but the wound was not sutured, but plugged with iodoform gauze. The patient recovered.

Hospital Appointments.

The following honorary medical officers were elected at a meeting of the board of directors of the Sydney Hospital, held on March 6th:—Physician, Dr. L. R. Huxtable (re-elected unopposed); surgeon, Dr. W. Goode (re-elected unopposed); gynæcologist, Dr. Thomas Chambers (re-elected unopposed); assistant gynæcologist, Dr. Ralph Worrall (re-elected unopposed); aural surgeon, senior, Mr. A. J. Brady (re-elected unopposed); junior, Dr. W. C. Wilkinson (re-elected); dermatologist, Dr. F. A. Bennet.—At a recent meeting of the committee of the Women's Hospital, Melbourne, Dr. A. G. Salter was elected assistant resident medical officer. There were five candidates, including a woman graduate, who was second on the poll.

Medical Defence Association of Victoria.

A Medical Defence Association has just been formed in Victoria, on the lines of the English Association, and registered as a limited liability company. Over fifty members have joined, and the following officers have been elected:—President, Dr. G. Rothwell Adam; vice-president, Mr. G. A. Syme; hon. treasurer, Dr. F. I. Owen; hon. secretary, Dr. C. E. Goodall; council, Dr. E. W. Anderson, Mr. Brett, Dr. Hamilton, Dr. Howard, Dr. Jamieson, Dr. McAdam, and Dr. Mullen.

HER ROYAL HIGHNESS THE PRINCESS OF WALES has graciously consented to open a grand bazaar in aid of St. Mary's Hospital, Paddington, at the Portman Rooms, on Thursday, June 27th next.

TRAINING OF PROBATIONERS. — The London Hospital has purchased the lease of a house in Bow-road for the preliminary training of nurses during their periods of probation before entering upon hospital work. These pupil probationers, besides being taught the practical duties of a nurse, will receive instruction in elementary physiology, anatomy, hygiene, cookery for the sick, &c., and preference will be given to applicants who are between the ages of twenty-five and thirty-five years, and who have received a good education.

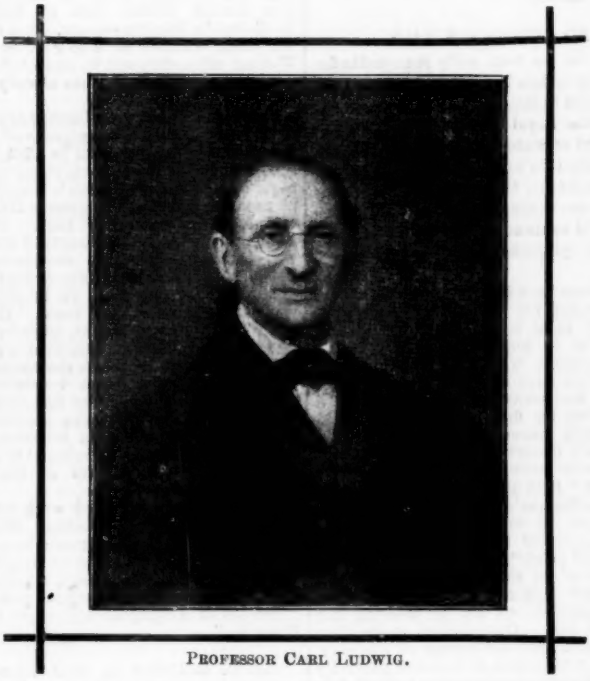
ROYAL HOSPITAL FOR WOMEN AND CHILDREN.—The festival dinner in aid of the funds of this hospital was held at the Hôtel Metropolé on May 4th, the Hon. W. F. D. Smith, M.P., presiding. The origin of the institution was a dispensary in Doctor's-commons, founded by Dr. Davis in 1816. In 1824 it was transferred to the Waterloo-road, and in 1875, its position in that thoroughfare being retained, the accommodation was increased to six wards containing fifty beds. Last year there were 591 in-patients and 7817 out-patients, who made upwards of 32,000 attendances. Mr. H. M. Stanley, replying to the toast of "The Visitors," emphatically expressed his admiration of the beneficent work carried out by the hospital. Donations to the amount of £1350 were announced in the course of the evening.

Obituary.

PROFESSOR CARL LUDWIG.

THE death of Professor Carl Ludwig has deprived the world not only of its greatest teacher of physiology, but of one whose labours in this department of science have been of the utmost service to practical medicine. Numerous and important as the discoveries which Ludwig and his scholars have made, the most important work of his life will nevertheless be his introduction of self-recording instruments into the domain of physiology. With characteristic generosity he was always careful to bring prominently forward the works of his predecessors, and he venerated Stephen Hales, the English country clergyman who first measured the pressure of the blood in a glass tube, as the pioneer who first estimated physiological processes quantitatively. Ludwig's invention of recording the oscillations of blood pressure in animals by a pen swimming on the surface of a manometer was followed in a few years by the sphygmograph of Vierordt and the elaborate apparatus of Helmholtz for estimating the rate at which a stimulus travels along nerves. All the recording instruments—and they are now very numerous — by which the various movements of living beings write their own record automatically are directly descended from the kymograph of Ludwig. The great object of his life was to withdraw the phenomena of physiology from the haze of fancy and incertitude in which they were up to his time more or less enveloped, and to bring them into a line with the well-known phenomena of physics and chemistry. To this end his three friends, to whom he dedicated his Text-book of Physiology—Professor Brücke, Professor Helmholtz, and Professor Du Bois Reymond—also worked, and the effect of the labours of this band upon physiological science it would be impossible to over-estimate. To this object Ludwig devoted the whole of a long life of tireless industry, working almost to the last with wonderful vigour. A Hessian by birth, Carl Friedrich Wilhelm Ludwig studied at Marburg and Erlangen. He graduated at Marburg in 1839 at the age of twenty-two, and after holding minor posts in that quiet university town he was appointed Professor of Comparative Anatomy in 1846. In the following year he invented the kymograph, and not only occupied himself in original researches, but initiated in the work several pupils, amongst whom may be mentioned Adolf Fick and Conrad Eckhard, now Professors of Physiology in Würzburg and Giessen respectively. The reputation he acquired caused his stay in the small town of Marburg as Professor to be short, for in 1849 he was called to the much more important position of Professor in Zürich. Hither his scholar Fick followed him, and here also he trained, amongst other distinguished pupils, Luthar Meyer (the distinguished chemist), Westphal (the neurologist), and Cloetta (Professor of Materia Medica). In 1855 he was called to a still wider sphere, and went to Vienna as Professor in the Josephinum. Amongst his pupils here were Professors Czermak, von Recklinghausen, W. Kühne, Politzer, Leber, Stephan, Kupffer, Schwanda, Jendrassik, Setschenow, Einbrodt, Holmgren, Kowalewsky, MacGillavry, Preyer, and others, through whom his teaching was spread and his influence extended throughout Austria, Hungary, Germany, Russia, Sweden, and Holland. After ten years' work in Vienna he was called to Leipzig, where, under his direction, the Physiological Institution soon became a centre of attraction to which physiologists flocked from all parts of the world. Hither he came in April, 1865, and here in April, 1895, he died.

These thirty years were a time of steady work, hardly broken even by autumn holidays, for the annual vacation was the time chosen by professors in other universities to come to enjoy Ludwig's genial society, to see what new work he was doing, to learn from him new methods, and sometimes to make a short research under his direction. The list of those who worked with him at Leipzig is too long to quote. Amongst his English and American pupils may be mentioned in the order of time, Lauder Brunton, Coats, Bowditch, Rutherford, Moseley, Ray Lankester, Stirling, Minot, Gaskell, Ward, Cash, Sewall, Meade Smith, Wooldridge, Walton, Buckmaster, Carslaw, F. S. Lee, F. Mall, W. H. Thompson, and Vaughan Harley. The number of his pupils altogether was considerably over two hundred, and by pupils we understand not those who had simply listened to his lectures, but men who had worked with him and been trained by him to plan out original researches for themselves as well as to perform the experiments necessary to carry them out. The patience, the kindness, the self-sacrifice he showed in the training of his pupils can hardly be imagined. Though much of the work was done by his own hand, he published it under the name of his pupils, and there is consequently a tendency to under-estimate its vast amount. It would be as impossible to enumerate his researches as to name all his pupils; all that can be done here is to indicate the general lines of work. These were a systematic investigation of the circulation of the blood and lymph, the alterations in the composition of these fluids as they flowed through the organs and tissues of the body, the secretion of glands and excretion by the kidneys. To him and his pupils we owe most of our knowledge regarding the conditions which affect the force and frequency of the heart, the contractility of the vessels, the position of the vaso-motor centre, the distribution of blood throughout the body, and the flow of lymph. The secretion of the saliva was shown by him to occur in the severed head of an animal provided the lymphatics around the glands were full so as to supply material for secretion. To his researches on the secretion of urine we owe our comprehension of why the urine is abundant in the high tension of gout, why it is scanty in mitral disease, and why the secretion becomes less copious when the gouty heart begins to fail and the arterial tension to fall. In order to study accurately the changes in the blood and lymph he devised the plan of keeping up an artificial circulation in individual organs, such as the lungs, kidneys, and liver. By this method new knowledge was also gained regarding the contractile power of the bloodvessels apart from



PROFESSOR CARL LUDWIG.

any nervous centre. The methods introduced by Ludwig into the study of physiology have also proved fruitful in pharmacology, and it is through their employment that any exact knowledge of the action of medicines on the heart and circulation which we now possess has chiefly been obtained. When we compare our present knowledge of the conditions which affect the circulation and of the means by which we can influence it with what it was when Ludwig began his work, we can guess, though we can hardly estimate exactly, how much practical medicine owes to him. His personal character was such as is very rare in any country and at any time, for to extraordinary insight and mental power he united a charm of manner, kindness, and courtesy which made all those who worked with him his life-long friends; while the example he showed of devotion to the search after truth, of self-sacrifice, and of generosity was such that they could hardly do otherwise than try to follow in his footsteps. His death will be deeply mourned all the world over, and the only consolation is that he died, as he would have wished, before his eye was so dim or his natural strength so abated that he could no longer engage in the work which was to him at once a duty and a delight.

ARTHUR EDWARD DURHAM, F.R.C.S.

THE annus medicus has so far been sadly remarkable for the number of deaths among leaders in medicine and surgery. Already the profession has had to lament the loss of a reigning and a past president of the Royal College of Surgeons of England, a leader in the field of State medicine has laid down his arms; and the whole scientific world is the poorer for the death of that master in physiology, Carl Ludwig. Following these comes the news of the death of one who, if not so prominently before the world as those already mentioned, was ever ready, by his skill, his sympathy, and his purse, to help the afflicted or the needy.

Arthur Edward Durham was born in 1833 at Northampton. He was not originally intended for the medical profession, and was at first employed in a bank. This occupation, however, proving distasteful to him, he entered at Guy's Hospital as a medical student when about the age of twenty—a late age in those days at which to commence. He also studied at the University of London, being a prizeman in 1854 and passing his first M.B. examination in 1857. For Mr. Hilton, whose favourite pupil he was, he did many excellent and elaborate dissections to show the nerve supply of joints. These were undertaken to illustrate the now well-known lectures on "Rest and Pain," in which Mr. Hilton alludes to his colleague's painstaking work as follows: "The first edition, in which I had the kindly and liberal help of my personal friends, Dr. Daldy and Mr. Durham, was soon out of print." Among Mr. Durham's earliest work were researches on the physiology of sleep. He trephined the skulls of dogs and inserted glass into the opening so as to reproduce, as far as possible, the physical conditions during life. Observations made after this procedure convinced him that the cortex of the brain was anæmic during sleep, not congested, as had been generally supposed. The results of these researches were embodied in a paper published in the Guy's Hospital Reports for 1860, as was also an excellent paper on Movable Kidneys, which may still be consulted with profit. With regard to his handiwork as a surgeon he was bold, prudent, and skilful; he particularly excelled in operations for recto-vaginal fistula, harelip, lithotomy, and abdominal surgery. His remarkably long fingers, that seemed to have eyes in their tips, his flexible wrist and sinuous movements of the hand made him powerful, searching, and graceful in all his manipulations, while his invention of the lobster-tail tracheotomy-tube has proved of great value. Throughout his hospital career, whether as student, dresser, or teacher, his kindliness of heart and willingness to assist others endeared him to many, while as a teacher of anatomy he was unrivalled. To his patients, whether rich or poor, he was always the same, ever unsparing of himself and his skill. Neither did he only look after his patients simply as a surgeon, but always endeavoured to give them mental comfort as well as physical by supplying them with interesting books or by helping with his purse those who their breadwinners being laid aside, would otherwise have felt the pinch of poverty. Dr. Hilton Fagge, who was long associated with him as editor of the Guy's Hospital Reports, shortly before his death said to a colleague, "Durham has just been to see me. I think he is the kindest man I ever knew," and this judgment was amply justified after his premature decease. Mr. Durham was never a strong man, and for many years suffered from attacks of vomiting, the cause of which was never discovered. He was also exceedingly deaf, an affliction which was a great trouble to him, but which, so far as his private practice went, was greatly mitigated by the unselfish and never-failing labours of his brother Frederic. For several years he was subject to frequent attacks of bronchitis, which ended in considerable pulmonary emphysema. During the last winter he had more than one attack, but with his indomitable spirit was ready for work again and again. On the Saturday before his death he enjoyed a long drive with his wife and on Sunday afternoon took a walk with an old friend. That evening, however, he was very ill, and after a restless night, with much coughing and distress, was found by a colleague, who was then sent for, to have pneumonia of the right lung. During the whole of Monday his condition became more and more hopeless, and he died early on Tuesday morning (May 7th). The funeral service will be held to-day (Friday) at St. George's, Hanover-square, at 1 P.M., and a special train will leave Waterloo at 2.45 P.M. to convey the remains to Woking, when they will be cremated. Mr. Durham leaves a widow and one son, who has already made his mark in his father's profession.

Mr. Durham held the following appointments and offices:—At the Royal College of Surgeons of England he was elected as a member of the Council in 1884, and held that office at the time of his death; he was vice-president in 1892–3, but was never an examiner. At Guy's Hospital he was demonstrator of anatomy; assistant surgeon in 1861; full surgeon in 1872; and consulting surgeon in 1894. He was president of the Students' Club and used to attend nearly every meeting. He was interested in every movement connected with the welfare of students, and was always ready to take the chair at any of their meetings or to put himself to any inconvenience to be of use to them. He was president of the Clubs' Union until last year, when he retired. Guy's Hospital was the first to start a union to amalgamate the various social institutions connected with the hospital. The Students' Club is the largest constituent institution of the Union, and Mr. Durham as its president was brought into contact with every student. He was also president of the cricket club. Almost the last meeting he attended was the ordinary general meeting of the Students' Club, held on March 26th, when three hearty cheers at the end of the meeting testified to his popularity.

In addition to the literary work alluded to above he contributed articles on Intestinal Obstruction to "Quain's Dictionary of Medicine"; articles on Diseases of the Nose and the Larynx to "Holmes' System of Surgery," second edition; and, amongst others, a valuable paper in the Transactions of the Royal Medical and Chirurgical Society on "Section of Laryngeal Cartilages for Removal of Morbid Growths."

SIR G. BUCHANAN, M.D. LOND., LL.D. EDIN, F.R.S.

THE somewhat sudden and unexpected death of Sir George Buchanan, late medical officer to the Local Government Board, has removed from our midst one of the most distinguished leaders in that branch of medicine which has to do with the prevention of disease and the promotion of public health. Conscious of failing health, he resigned his official post early in 1892, and recently under the advice of Dr. Ringer and Mr. Pollard he underwent an operation performed by the latter. The operation was quite successful, and convalescence seemed all but established, when on Sunday morning last, the 5th inst., he suddenly expired from heart failure at the age of sixty-four. Sir George Buchanan was a student of University College, where he greatly distinguished himself, and of which body he became a Fellow in 1864. At the London University he graduated B.A. in 1854 and M.D. in 1855, having at his M.B. taken three gold medals and two scholarships. He became physician to the London Fever Hospital and to the Hospital for Sick Children. Great Ormond-street, and for many years he held the post of medical officer of health to St. Giles. It was with credentials such as these that he first commenced work in the Medical Department of the Privy Council under Sir John Simon—a chief whom he

always held in highest veneration. For eight years this work was technically occasional only, but it took up most of his time. One of his earliest inquiries was into the working of the Vaccination Laws, and he then acquired that profound belief in the protective power of that operation which he maintained to the end of his career. He also reported on typhus fever and other questions arising out of the Cotton Famine, and it was at this period of his life that, whilst studying the influence upon mortality of large works of public health that he wrote his classical reports to show how the death-rate from phthisis had been reduced in proportion to the lowering of the subsoil water by means of works of sewerage. In 1869 Sir George Buchanan permanently joined the public health service of the State, and in December, 1879 he succeeded to the post of principal medical officer formerly held by Sir John Simon and Dr. Seaton. From that date his work was mainly administrative, and it included the organisation of a Cholera Survey of the country during the European epidemic of 1884–85, which was renewed with such success in 1892–94. But the annual reports which he issued as medical officer show that he was ever at work at the scientific aspects of preventive medicine, and they abound in introductory papers from his pen which placed him in the rank of the foremost sanitarians of the world. When he resigned his official position he was still glad to work to the utmost of his ability. He had duties as a Member of the Senate of the University of London; he took an active interest in the work and welfare of the Court of Assistants of the Society of Apothecaries; he advised the Grocers' Company as to their Research Scholarships; and he served on the Royal Commission on Tuberculosis. When Lord Basing, the chairman of that Commission, died, Sir George Buchanan was asked to take his place; and at this juncture he had to decide between at once submitting to an operation to relieve the serious progress of his malady and his desire, as he himself put it, to serve the Queen as long as he could. The latter motive overcame all other considerations, and only the other day he submitted to Her Majesty the report of the Commission. This little incident is, indeed, the key to his life's history. He loved work for work's sake, and this, above all, when it tended to the welfare of others. He was never self-seeking, but he always aimed to promote the advancement and welfare of those who worked with and under him. Though the State did but little to recognise his merits, others sought to honour him as best they could. The University of Edinburgh conferred on him the honorary LL.D.; and his numerous friends established the "George Buchanan" Gold Medal of the Royal Society. It was on his retirement only that he received the honour of knighthood.

The first part of the service connected with his burial was conducted by the Rev. Llewellyn Davies at St. Martin's-in-the-Fields on Thursday, and the second part at the Brookwood Cemetery in Surrey. At one or other of these services many of his friends were present. Most of his colleagues at Whitehall, including Dr. Thorne Thorne, C.B., F.R.S., and Mr. W. H. Power, F.R.S., were present. The President of the Local Government Board was represented by his private secretary, Mr. H. C. Monro; the secretarial department and the general staff were represented; and amongst others present were Sir Anthony Home, V.C., K.C.B., and Professor Michael Foster, Secretary to the Royal Society.

CARL VOGT.

THIS distinguished German biologist died at Geneva on May 6th at the advanced age of seventy-eight. He was born at Giessen on July 5th, 1817, and was the son of Philipp Friedrich William Vogt of Bern, a well-known Swiss pharmacologist. He studied under Valentin, and early devoted himself to physiology. In 1839 he went to Neufchâtel and assisted Agassiz in various zootomical researches, in particular contributing the whole of the first part of Agassiz and Desor's great work on "Freshwater Fishes of Central Europe." In addition, he wrote at this period his work "On Mountain and Glacier" (1843), "Text-book of Geology and Palæontology" (1846), the last edition of which was published in 1879, and "Physiological Letters" (1845). In 1844 he went to Paris, where he remained for two years, then visited Italy, living at Rome and Nice, and returned to Germany in the summer of 1847. He was appointed *privat-docent* at Giessen, but the revolution of 1848 arrested his professional career. He threw himself with ardour into the movement as a democrat, was elected Colonel of the Civic Guard of Giessen, and became a Deputy to the German National Assembly, where he distinguished himself as a brilliant orator and an untiring advocate of democratic progress. He followed Parliament on its transfer to Stuttgart, and was one of the ablest as well as one of the last supporters of the National party. He was compelled, however, to fly from Germany, and returned to Bern and Nice, where he resumed his zoological studies, the fruits of which were contained in his "Ocean and Mediterranean Sea." In 1852 he was nominated Professor of Geology at Geneva, and was subsequently appointed to the chair of Zoology in that city. He from this time identified himself with the civic life of Switzerland, becoming a member both of the Federal and National Councils. He was a voluminous writer, as, in addition to the works quoted above, he wrote "Pictures of Animal Life," "Researches upon Animal Communities," which contained much covert satire on political life; "Superstition and Science," a book advocating strong materialistic ideas and directed against the views of Wagner, "Zoological Letters," "Artificial Fish Culture," "Lectures on Useful and Noxious Animals," and many others. In 1861 he conducted a scientific expedition to the North Cape. He was one of the earliest men of standing and science in Germany to accept the views of Darwin, and was a consistent and zealous supporter of them.

GEORGE LAFFAN, M.D., M.Ch. R.U.I.,

SURGEON-MAJOR, ARMY MEDICAL STAFF.

WE regret to announce the death of Surgeon-Major Laffan, which took place on April 27th in the Presidency of Madras. He was born in county Cork in 1845, and studied medicine in Queen's College, Cork, graduating as M.D. in 1876. In the following year he entered the Army Medical Service, and became surgeon-major in 1889. Surgeon-Major Laffan took part in the Soudan Expedition of 1884–85, and in the Manipur Expedition of 1891, his services in each of these operations gaining him the award of a medal with clasp.

SAMUEL DAVIDSON, M.D. ABERD., M.R.C.S. ENG.

BY the death of Dr. Samuel Davidson of Meikle Wartle, Aberdeenshire, which took place on April 30th, our profession loses a venerable and highly respected member. The deceased gentleman, who had attained his eighty-third year and was the oldest medical practitioner in the county, having outlived most of his early contemporaries, became a Member of the Royal College of Surgeons of England as far back as 1834, and graduated as M.D. at Aberdeen in 1857. For the greater part of his life he resided at Meikle Wartle and enjoyed a considerable practice carried on throughout an extensive rural district, where he was regarded by all classes as a sound adviser and a trusty friend.

Medical News.

UNIVERSITY OF OXFORD: EXAMINATIONS IN MEDICINE AND SURGERY, TRINITY TERM, 1895.—The Regius Professor of Medicine gives notice that the following examinations will take place in Trinity Term on each day at 10 A.M.:—

Final Examination for the Degree of Bachelor of Medicine.—To commence on Monday, June 10th, in the examination schools.
Examination for the Degree of Master in Surgery.—To commence on Wednesday, June 19th.
First Examination for the Degree of Bachelor of Medicine.—To commence on Friday, June 28th.

The secretary to the Board of Faculties gives notice that he will receive the names of candidates—either by letter, at any time not later than the under-mentioned days respectively, or from the candidates in person—at his office in the Clarendon-building as follows:—

1. *Final Examination for the Degree of Bachelor of Medicine.*—Fee £1 11s. 6d. On Saturday, May 25th, from 9.30 A.M. till 10.30 A.M.
2. *Examination for the Degree of Master in Surgery.*—Fee £5. On Wednesday, June 5th, from 9.30 A.M. till 10.30 A.M.

3. *First Examination for the Degree of Bachelor of Medicine.*—On Friday, June 14th, from 9.30 A.M. till 10.30 A.M.

Fee for Organic Chemistry and Materia Medica 16s. each, and for the remaining subjects £1 11s. 6d.

Names must be transmitted or given in on one of the forms issued for that purpose. These forms can be had on application at the secretary's office. Candidates whose names have not been received at the above-mentioned times can still be admitted to examination on payment of an additional fee of two guineas, provided that their forms and fees reach the secretary at his office before noon on Thursday, June 6th, for (1); on Saturday, June 15th, for (2); and on Monday, June 24th, for (3). Candidates for the final examination must have passed the several subjects of the first examination—viz., (1) Organic Chemistry, (2) Materia Medica and Pharmacy, (3) Human Anatomy, and (4) Human Physiology; but any candidate who has obtained a first or second class in Animal Physiology in the Honour School of Natural Science is exempt from Human Physiology, and any candidate who has obtained a first or second class in Chemistry in the Honour School of Natural Science is exempt from Organic Chemistry. Candidates who passed all the examinations for the degree of B.A. before the end of Trinity Term, 1886, and who were registered as medical students on or before March 16th, 1886, are exempt from Organic Chemistry. Candidates for the examination for the degree of Master in Surgery, if they be not already members of the surgical staff of a recognised hospital, must produce a certificate countersigned by the Regius Professor of Medicine of having acted in such a hospital as dresser or house surgeon for six months. Candidates for the first examination must have passed in all the subjects of the Preliminary Examination—viz., (1) Mechanics and Physics, (2) Chemistry; (3) Animal Morphology; and (4) Botany; but any candidate who passed all the examinations for the degree of B.A. before the end of Trinity Term, 1886, or any candidate who obtained a class in Animal Morphology, or Animal Physiology, or Botany in the Honour School of Natural Science in or before Trinity Term, 1888, is exempt from Animal Morphology and Botany.

UNIVERSITY OF DURHAM: FACULTY OF MEDICINE.—The following candidates satisfied the examiners at the First Examination for the Degree of Bachelor in Medicine at the College of Medicine, Newcastle-upon-Tyne, in April, 1895:—

1.—*Elementary Anatomy and Physiology, Chemistry with Chemical Physics, and Botany with Medical Botany.*—John Robert McKinlay, Westminster Hospital; and Bertram Crossfield Stevens, St. Thomas's Hospital.

2.—*Anatomy and Physiology.*—Thomas Harold Gibbs, College of Medicine, Newcastle-upon-Tyne.

3.—*Chemistry with Chemical Physics, and Botany with Medical Botany.*—Vincent Burrow, St. Mary's Hospital; Francis Ward Crossman and Henry Reginald Ellis, St. Bartholomew's Hospital; Thomas Haylock Hulme, London Hospital; and Stanley Southam, Owens College, Manchester.

4.—*Botany with Medical Botany.*—Charles Henry Dickens, M.R.C.S., L.R.C.P., St. Thomas's Hospital.

The following passed under the New Regulations:—

1.—ELEMENTARY ANATOMY AND BIOLOGY, CHEMISTRY, AND PHYSICS.

Second-class Honours.—Robert Lewis Routledge and Carl Wahlgren von Bergen, College of Medicine, Newcastle-upon-Tyne.

Pass List.—Arthur Samuel Arthur, Thomas Pousford Cann, Henry Edward Davison, College of Medicine, Newcastle-upon-Tyne; Thomas Stokoe Elliot, Cooke's School of Anatomy; Henry Eggleston, James Andrew Hartigan, James McConnell, College of Medicine, Newcastle-upon-Tyne; and Edgar Sheldon Wilkinson, St. Bartholomew's Hospital.

2.—ELEMENTARY ANATOMY AND BIOLOGY.

William Cowan Brown, Henry Adamson Fielden, Lawrence Fielder Heumans, Ernest Inman, Hugh Robert Kendal, Guy Brougham Picton, all of the College of Medicine, Newcastle-upon-Tyne.

3.—CHEMISTRY AND PHYSICS.

Thomas Blandford Watson, College of Medicine, Newcastle-upon-Tyne.

4.—BIOLOGY AND PHYSICS.

William Henry Isaacs Bathurst, King's College.

5.—ELEMENTARY ANATOMY, CHEMISTRY, AND PHYSICS.

Francis Gerrard Hamilton Cooke, Cooke's School of Anatomy.

The following passed the Second Examination for the degree of Bachelor in Medicine:—

ANATOMY, PHYSIOLOGY, AND MATERIA MEDICA.

Second-class Honours.—John Robert McKinlay, Francis William Rix, Westminster Hospital; and John Aston Swindale, Mason College, Birmingham.

Pass List.—Thomas George Drabble Adams, Walter Osborne Arnold, College of Medicine, Newcastle-upon-Tyne; Charles Henry Dickens, St. Thomas's Hospital; Frank Chubb Ford, St. Bartholomew's Hospital; Thomas Haylock Hulme, London Hospital; Henry Herbert Markham, Daniel Wells Patterson, Walter Augustus Peverley, Theodore John Phillips, College of Medicine, Newcastle-upon-Tyne; Charles Seaver Smith, Mason College, Birmingham; and Robert Alfred Wilson and Thomas Woodman, College of Medicine, Newcastle-upon-Tyne.

At the Convocation held on Saturday, April 27th, the following gentlemen were recommended for the Degree of Doctor in Medicine for practitioners of fifteen years' standing, viz.:—

William Percy Ashe, L.R.C.P., M.R.C.S.; Edward Ferrand, L.R.C.P., M.R.C.S.; Stanford Harris, M.R.C.S., L.S.A.; Benjamin Jones, L.R.C.P., M.R.C.S.; Henry Arthur Latimer, M.R.C.S., L.S.A.; William Moxon, L.R.C.S. Edin., M.R.C.S.; John Taylor, L.R.C.P. Edin., L.F.P.S. Glasg.; Ebenezer Stanley Smith, M.R.C.S., L.R.C.P.; and Thomas Frederic Young, M.R.C.S., L.S.A.

The following gentlemen were recommended for the Degree of Doctor in Medicine, viz.:—

George Henry Vane Appleby, M.B., B.S. Durh.; Francis William Fullerton, M.B., B.S. Durh., M.R.C.S., L.R.C.P.; Reginald Green, M.B., B.S. Durh.; Walter William Hodgins, M.B., B.S. Durh., M.R.C.S., L.R.C.P.; William Harvey Maidlow, M.B., B.S. Durh., F.R.C.S.; and Francis Herbert Marson, M.B., B.S. Durh., M.R.C.S., L.R.C.P.

The following gentleman was recommended for the Degree of Doctor in Hygiene, viz.:—

William Henry Turnbull, M.B., B.S., B.Hy. Durh.

The following gentleman was recommended for the Degree of Master in Surgery, viz.:—

William Martin, M.A., M.B., B.S., College of Medicine, Newcastle-upon-Tyne.

The following gentlemen were recommended for the degree of Bachelor in Medicine (M.B.), viz.:—

First-class Honours.—Charles Allan Brough, L.R.C.P. & S. Edin., College of Medicine, Newcastle-upon-Tyne.

Second-class Honours.—James Atkin Henton White, Mason College, Birmingham; John Ralph Prior, King's College; Edward Turner, St. Bartholomew's Hospital; Sidney Herbert Hawley, Mason College, Birmingham; and Harold Dickinson Senior, Charing-cross Hospital.

Pass List.—Norman Bennett, College of Medicine, Newcastle-upon-Tyne; Robert Montagu Le Hunter Cooper, St. Mary's Hospital; William I'Anson Charlton; Percival Davidson, College of Medicine, Newcastle-upon Tyne; Ernest Edward Frazer, Ernest Rowland Fothergill, Guy's Hospital; Frank Chubb Ford, M.R.C.S., St. Bartholomew's Hospital; John Reginald Fuller, St. Mary's Hospital; Edward Fielden, College of Medicine, Newcastle-upon-Tyne; Richard Withers Gilmour, St. Bartholomew's Hospital; Gilbert Gocher, Guy's Hospital; Charles Hanks, Ernest Robert Kendall, Wilfred Robert Kingdon, College of Medicine, Newcastle-upon-Tyne; George Edwyn Middlemist, London Hospital; William Harland Peake, Guy's Hospital; Marcus Sinclair Paterson, St. Mary's Hospital; Ernest Percy Satchell, Mason College, Birmingham; and George William Scott and Tom Sanderson, College of Medicine, Newcastle-upon-Tyne.

The following gentlemen were recommended for the Degree of Bachelor in Surgery (B.S.):—

Norman Bennett, William I'Anson Charlton, College of Medicine, Newcastle-upon-Tyne; Robert Montagu Le Hunter Cooper, St. Mary's Hospital; Percival Davidson, College of Medicine, Newcastle-upon-Tyne; Ernest Edward Frazer, Guy's Hospital; John Reginald Fuller, St. Mary's Hospital; Ernest Rowland Fothergill, Guy's Hospital; Edward Fielden, College of Medicine, Newcastle-upon-Tyne; Richard Withers Gilmour, St. Bartholomew's Hospital; Gilbert Gocher, Guy's Hospital; Charles Hanks, College of Medicine, Newcastle-upon-Tyne; William Harland Peake, Guy's Hospital; Marcus Sinclair Paterson, St. Mary's Hospital; John Ralph Prior, King's College; Ernest Percy Satchell, Mason College, Birmingham; George William Scott, Tom Sanderson, College of Medicine, Newcastle-upon-Tyne; Edward Turner, St. Bartholomew's Hospital; and James Atkin Henton White, Mason College, Birmingham.

The following gentlemen were recommended for the Degree of Bachelor in Hygiene:—

George John Awburn, M.B., M.S. Edin.; George Henry Vane Appleby, M.B., B.S. Durh.; Edward Turner, M.R.C.S., L.R.C.P.; and Edward Cecil Willcox, M.B., B.S. Durh.

And the following gentleman was recommended for the Diploma in Public Health (D.P.H.):—

William Henry Symons, L.S.A.

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Alexander Rosner has been recognised as *privat-docent* in Obstetrics.—*Gratz:* Dr. Adolf Tarisch has been promoted to an Ordinary Professorship of Dermatology.—*Prague:* Dr. Eduard Nessel, dental surgeon, has been promoted to an Extraordinary Professorship in the University of Bohemia.—*Vienna:* Dr. Norbert Ortner has been recognised as *privat-docent* in Medical Pathology. Dr. Leopold Réti has been recognised as *privat-docent* in Laryngology.

ABERDEEN UNIVERSITY CLUB, LONDON.—The May dinner of this club will be held at the Holborn Restaurant on Wednesday, the 15th inst., at 7.30 P.M., when the Rev. Donald MacLeod, D.D., will occupy the chair.

THE Local Government Board has confirmed the appointment of Mr. F. J. Brown of Newark as medical officer and public vaccinator for the Caunton and Elston districts of the Southwell Union, at a salary of £32 a year. As Mr. Brown does not reside within these districts the appointment is sanctioned for one year only, and must be annually confirmed.

OXFORD MEDICAL SOCIETY.—A special meeting will be held in the anatomical lecture theatre on Friday, May 17th, at 8.30 P.M. Dr. Sidney Martin will read a paper on the Pathological Results of the Royal Commission on Tuberculosis. The President of the society, Professor Burdon Sanderson, one of the Commissioners, will take part in the discussion. Visitors will be welcomed.

ROYAL VISIT TO THE CHELSEA HOSPITAL FOR WOMEN.—Her Royal Highness the Princess Mary Adelaide, Duchess of Teck, has graciously consented to visit the Chelsea Hospital for Women on Wednesday, May 22nd, at 4 P.M., when her Royal Highness will open and name the "Mary Adelaide" Ward, and also receive purses of money from ladies who are willing to aid this institution. Purses may be obtained from the Secretary, at the hospital.

THE *Charity Record* announces the following complete list of Baron de Hirsch's benefactions to hospitals &c., for 1895 :—

Queen Charlotte Lying-in	£200	British Home for Incurables	£300
Bethnal Green	200	Brompton Consumption	500
Charing Cross	500	St. Mary's	300
Evelina	200	North-Eastern	300
North-West London	500	Cancer (Free)	200
Westminster	300	Jewish Convalescent	200
St. Andrew's Convalescent Home	200	King's College Hospital	300
Poplar	200	Middlesex	300
Princess Mary Village Homes	100	Great Ormond-street	100
Metropolitan Convalescent Institution	100		£5000

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Opium Commission.

SIR JOSEPH PEASE has given notice that on Friday, May 24th, he will call attention to the Report of the Royal Commission on Opium, and move: "that this House, having had before it its resolution of June 30th, 1893, pressing on the Government of India to continue their policy of greatly diminishing the cultivation of the poppy and the production and sale of opium, and having had presented to it the Report of the Royal Commission, appointed Sept. 2nd, 1893, to inquire into various matters connected with the cultivation of the poppy in India, is of opinion that the system by which the Indian Opium revenue is raised is morally indefensible, and would urge upon the Indian Government that they should cease to grant licenses for the cultivation of the poppy and sale of opium in British India, except to supply the legitimate demand for medical purposes, and that they should at the same time take measures to arrest the transit of Malwa opium through British territory."

Factories and Workshops Bill.

The Factories and Workshops Bill is now being considered by the Grand Committee of the House of Commons on Trade, but so far very few amendments have been made in the measure. On Tuesday, May 7th, there was an important debate in connexion with the clause which provides a penalty for the employment of persons in places injurious to health. Mr. William Allen proposed an amendment making it obligatory on the occupiers of factories and workshops to obtain a license every year from the inspector of the district. Mr. Buxton, on behalf of the Government, expressed sympathy with the object of the amendment, but said the apathy of many local sanitary authorities was notorious, and they could not leave this important matter in their hands. He added, however, that with regard to new premises the Government are going to propose some form of licence or certificate. Mr. Asquith spoke in the same line. What, he asked, would be the use of inspecting these places at the beginning of the year unless their sanitary condition were afterwards kept under constant observation? Several members took the view that the amendment would interfere with cottage industries in rural districts and drive trade into the hands of the large factory owners in towns. In the end the amendment was defeated by a large majority.

The Midwives Registration Bill.

This Bill, which has been introduced into the House of Lords, consists of eighteen clauses. The text of the Bill is printed in full in another column.

HOUSE OF COMMONS.

THURSDAY, MAY 2ND.

The Operation of the Merchandise Marks Act.

Mr. Bryce, President of the Local Government Board, answering a question on this subject put by Mr. Brookfield for Colonel Howard Vincent, said that ten summonses in all have been issued under the Act since Jan. 1st, 1894, and in all of these convictions had been obtained. Other cases were also submitted to the Solicitor for his opinion as to proceedings, but as to some he advised that they did not come within the Act, and in other cases there was not evidence to secure a conviction.

The Veterinary College for Ireland.

Mr. John Morley, in reply to Mr. Johnston, said it is the intention of the Government to bring in a Bill to make certain provision in connexion with the proposed Veterinary College for Ireland, an institution which, in the opinion of the Government, will be of considerable educational advantage. The provision will not be for the endowment of the college, but merely a grant of a lump sum in aid towards the acquisition of buildings and fittings. The grant will not reduce the annual sum paid to the Intermediate Education Board as their share of the local taxation duties, but will be withdrawn from an accumulation in their hands in respect of their share in these duties not expended by them in former years.

Weather Forecasts for Agriculturists.

Mr. Herbert Gardner, President of the Board of Agriculture, said, in answer to Mr. Strachey, that so far as he could gather from the information which had reached him the experimental exhibition of the weather forecasts at the telegraph offices in rural districts has not been so beneficial as he had hoped, and he was doubtful whether the assistance rendered to agriculturists is sufficient to justify him in making a further application to the Treasury on the subject. He should be glad, however, to further consider the matter, and if it should appear that the arrangement is of real service to agriculturists during harvest time he would do his best to secure its continuance in localities where it is appreciated.

The Budget.

The Chancellor of the Exchequer at this sitting of the House made his annual statement as to the finances of the country. The only changes in taxation he proposed were the withdrawal of the extra 6*d.* per gallon duty on spirits and the reimposition for another year of the extra 6*d.* per barrel on beer. In the course of his statement Sir William Harcourt made some interesting references to the food and drink of the year. With regard to tea, he said that the duty had yielded £3,587,000, or £94,000 more than in the year 1893-94. This increase represented in quantity 5,650,000 lb., and in ratio 2·6 per cent., this percentage being a good deal more than twice as great as the increase of the population. The teas of India and Ceylon now constitute 86 per cent. of the whole, whilst in 1864 they constituted only 3 per cent. of the consumption. The yield of tobacco in the past year had been £10,416,000, or £·96,000 more than in 1893-94. This increase, Sir William Harcourt said, was probably not to be taken as a normal figure, as the consumption in the latter year was no doubt depressed by the long-continued coal strike and other circumstances of depression, which made the tobacco revenue practically stagnant; but it would be found that the average annual increase over seven years had been nearly 3 per cent. per annum, which was about three times as great as the increase of population. The consumption of coffee had been steadily decreasing. In 1885-86 the revenue from it was £203,000; last year it was only £170,000. Cocoa, on the other hand, was steadily growing in consumption. In the last year there had been an increase of 3,383,000 lb., as compared with 1893-94, and an improvement of £14,000 in the revenue. Dried fruits showed an increase of £30,000 beyond the figure of the preceding year. Turning to another class of commodities, Sir William Harcourt said that, as he had indicated on several former occasions, the consumption of wine was constantly on the decrease. The receipt in 1894-95 was £1,144,000, as against £1,210,000 in 1893-94. Since 1875 the quantity had fallen from 17,250,000 gallons to 13,830,000, and in the last year the fall was 250,000 gallons. The quantity of sparkling wine, which stood at 825,000 dozens in 1890, had fallen to 650,000 dozens in the last year. The produce of the duty on spirits had been £4,197,000, or £67,000 in excess of 1893-94. For the first three quarters up to Dec. 31st there had been no increase on the previous year, and it would seem that if things had gone on in their ordinary course, in spite of the extra sixpence, there would have been little or no increase of revenue, but owing to the extraordinary severity of the weather in February the receipts from rum rose suddenly to an excess of £100,000. Brandy fell £91,000 below the yield of 1893-94. The taste for this drink was evidently on the decline, for in fifteen years the quantity had diminished by 1,000,000 gallons, or 31 per cent., while the population had increased 13 per cent. An examination of the increased and increasing consumption of non-dutiable articles—such as meat, eggs, sugar, butter, and cheese; fruit, such as apples, oranges, and lemons; fuel, as coal; light, as petroleum—showed from year to year, and markedly last year, an increase in the average consumption of these articles. There was one article which was perhaps a greater test than any other, and that was meat. In the three years 1882 to 1884 the consumption of meat was 108 lb. per head; and in the three years 1891 to 1893 the consumption was 119 lb. per head, or an increase of 10 per cent. The consumption of foreign and home-grown meat in these latter three years was the largest that ever took place, and the increase in the consumption of an article like meat was a significant indication of the well-being of the people. To sum up, Sir William Harcourt said that the figures went to show that the mass of the people had in the past year, and in many years past, been able to obtain, and had enjoyed, still larger quantities of the necessaries and comforts of life at lower prices.

MONDAY, MAY 6TH.

Quarantine in South America.

Sir Edward Grey, in the course of a reply, said that the South American Republics had been approached on the subject of their quarantine

regulations, but none of them had as yet expressed themselves willing to adopt the principles of the Dresden Sanitary Convention. Mr. Phipps, Her Majesty's Minister at Rio de Janeiro, was specially instructed on proceeding to his post to make earnest efforts for improvement in the quarantine arrangements in Brazil, and a conference was now sitting at Rio de Janeiro to consider the question. It was understood that the Brazilian Government had promised to provide three fresh quarantine stations, besides some other reforms in their regulations.

Treatment of Fever Patients in London.

Mr. Bartley asked the President of the Local Government Board whether his attention had been drawn to a report, dated April 8th last, from the medical officer of health of Islington concerning the premature discharge of fever patients from the Metropolitan Asylums Board's hospitals; and whether he would allay public anxiety on the subject by appointing a committee to inquire into the question?—Mr. Shaw-Lefevre replied: I have communicated with the Metropolitan Asylums managers with respect to the report mentioned in the question, and I am informed that they have referred to their General Purposes Committee for consideration and report, not only concerning this particular report, but also the whole question raised in the annual report for 1894 of the medical superintendent of the North-Eastern Hospital as to the outbreak of illness in households after the return from hospital of recovered patients. Allegations have been made as to similar outbreaks where patients have been discharged from the hospitals of other bodies, and the subject has recently received the attention of the Medical Department of the Local Government Board, who hope shortly to issue a report with respect to it.

The Water-supply at Aldershot.

Mr. Campbell-Bannerman, in answer to a question, said that the water-supply to the new barracks at Aldershot had been recently investigated and the water had been analysed by the Professor of Military Hygiene at Netley. The steps to be taken on that report were now under consideration. It was not usual to publish such a report.

Accidents in Coal Mines.

Mr. Asquith, replying to Sir James Fergusson, said that the total number of persons injured in coal mines during 1894, as reported under Section 35 of the Coal Mines' Regulation Act of 1887, was 4061. In future this information would be published in the summary of statistics of mines and minerals.

TUESDAY, MAY 7TH.

London University Bill.

Mr. Acland intimated that this Bill would be introduced in the House of Lords on Thursday, May 9th.

The Meat-supply for the Army.

A number of questions on this subject were addressed to the Financial Secretary to the War Office, and in the course of his replies Mr. Woodall said that the contractor was required to deliver at least 40 per cent. of the meat from home-killed supplies. Foreign supplies of beef were only available between October and the end of May, and during the rest of the year the beef supplied must be home grown. As to mutton, it was only allowed on one day in the week, and it might either be refrigerated or home grown. The quality of the meat was found every year to be more satisfactory.

WEDNESDAY, MAY 8TH.

Cremation.

Sir Thomas Roe introduced a Bill to empower burial boards and local authorities to provide for cremation.

IN COMMITTEE.

Food Products Adulteration.

The Select Committee of the House of Commons on the Adulteration of Food Products resumed the examination of witnesses on Tuesday, May 7th, Sir Walter Foster occupying the chair.

Mr. Trengrouse, a member of the Produce Exchange and the London Chamber of Commerce, gave evidence with regard to filled or imitation cheese. He would not say that it was absolutely without nutritive properties, but he certainly would not care to eat it himself. He had been offered a liberal commission to sell it but had refused, being of opinion that it was an article of commerce by which the public were defrauded. Its manufacture and importation should, in his opinion, be suppressed, and he would go so far as to inflict imprisonment on the occasion of a third conviction. Lard was imported in large quantities from America. Generally speaking, it was pure, but adulteration was practised by the introduction of cotton-seed oil, stearine, and beef fat.

Mr. Henry Lane, another member of the London Chamber of Commerce, went at length into the lard question. He expressed the opinion that adulteration does not go on now to anything like the extent it used to do, and he advocated strict scrutiny and the imposition of substantial fines.

Mr. J. M. Harris, from Calne, said it was possible to get from English, Scotch, and Irish pigs a lard which was as solid as butter; but in the case of American pigs, which were fed chiefly on Indian corn, the lard was not so solid, and foreign fat was introduced into it on the plea of stiffening. He believed that a great quantity of raw material brought from America was treated in this country and sold as home-grown. In this connexion he cited lard and bacon.

The Committee then adjourned.

The Committee met again on the following day, with Sir Walter Foster in the chair.

Mr. Alexander Osborne, of Messrs. Osborne and Sons, wholesale provision merchants, Glasgow, gave evidence with regard to butter and cheese. His chief recommendation was that foreign Governments should be invited to give a guarantee with the butter and cheese coming from their respective countries and put a brand upon them, and that if they declined we in this country should not allow the articles to be imported. He defended the practice which prevails in some parts of Scotland of making cheese from skim milk and oleo, saying that a perfectly good and wholesome article was produced. He gave the results of analysis of samples of Dunlop cheese, which is the kind mainly made in Scotland—this oleo cheese, and Gorgonzola. In the matter of butter fat the Dunlop cheese contained 31·68 per cent., the oleo 11·32, and the Gorgonzola 26·99 per cent.; other fat Dunlop nothing, oleo 16·98, and Gorgonzola 6·75 per cent.; casein Dunlop 32·30 per cent., oleo 32·64, and Gorgonzola 26·18 per cent.

Mr. Fry was examined as to the trade in cocoa. He claimed that the introduction of sugar and arrowroot to increase the solubility of the article could not be regarded as adulteration in any sense. He did not see any great objection to the proportions being stated on the label, although he thought it hardly fair to the manufacturer that he should be called upon to make the disclosure. As to the arrowroot, it would not be right to describe it as starch, because it would prejudice the article in the mind of the public. It would be as fair to call arrowroot in cocoa starch as it would be to call gelatine used in blanc mange glue. As to the term "cocoa," it ought to be borne in mind that the present mixtures were on the market many years before pure cocoa was heard of.

Mr. Hahnemann Epps, director of James Epps and Co., Limited, and chairman of the Cocoa Subsection of the London Chamber of Commerce, was next examined. He explained at some length the processes for the preparation of cocoa. The nibs, he said, were ground to a paste, and then one of three methods was employed to subdivide and incorporate or to regulate the constituents of the cocoa, particularly the fat, of which there was usually 50 per cent. present in the nibs. The oldest method was that of adding sugar and arrowroot; another method was to remove a large proportion of the fat; and the third was in addition to treat the cocoa chemically with potash, soda, or ammonia. For different classes of people, varying as they did in their wants and tastes, the first two methods were suitable and were appreciated. The third method by chemical treatment seemed to him to be objectionable. The native character of the cocoa with the aroma and colour was destroyed, and it was stated by Dr. Sidney Ringer of Oxford University and the German chemist Moeller that the added alkalis directly hindered digestion and impaired the nutrition of the body. His firm had considered the matter on many occasions and had deliberately refused to employ either of the alkali processes. It would, in his opinion, be unwise to place restrictions on the supply of good preparations of cocoa which retained the constituents of cocoa intact, which were economical in use, and to which the people were accustomed. It was well known that in the Royal Navy since 1822 the sailors and marines, numbering now 70,000, had been daily supplied with Government-made prepared cocoa, composed of about 50 per cent. cocoa and 50 per cent. of sugar and arrowroot, and Admiral Field had lately given his opinion that such a diet for hard-working men could not be improved upon. As cocoa was very rich with fat, which, if left free, would float in great drops on the surface, the manufacturer had to consider what was the actual quantity of sugar and arrowroot required to incorporate with the cocoa and furnish readily a smooth and agreeable drink. His firm declared on their labels the ingredients used in the preparation of cocoa.

The Committee adjourned for a week.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ADCOCK, G. R., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer for the Hoxne Union.

BAKEWELL, R. TURLE, M.B., M.R.C.S., has been appointed Anæsthetist to the Hospital for Sick Children, Great Ormond-street.

BLAKISTON, A. A., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Glastonbury.

BODEN, J. S., M.R.C.S., L.R.C.P., has been appointed House Accoucheur to King's College Hospital.

BOND, N. TROUGHTON, M.B., C.M. Edin., has been appointed Medical Officer for the No. 5 District of the Liskeard Union.

BUNSFIELD, A., B.A. Cantab., B.Sc. Lond., M.R.C.S., L.R.C.P., has been appointed Assistant House Physician to King's College Hospital.

BURRIDGE, H. A., M.R.C.S., L.R.C.P., has been appointed Assistant House Accoucheur to King's College Hospital.

BURY, EDWARD C., M.D. St. And., M.R.C.S., has been appointed Medical Officer of Health to the Wisbech District Council.

CLAY, J., M.D. Durh., B.S., has been appointed House Surgeon to the Radcliffe Infirmary, Oxford.

COUNSELLER, W. P., M.D. Durh., L.R.C.P., L.M. Irel., M.R.C.S., has been appointed Medical Officer of Health to the Clitheroe Rural District Council.

COX, WM., M.R.C.S., has been appointed Medical Officer of Health for the Winchcombe Rural District Council.

CRAWFURD, RAYMOND, M.A., M.B., B.Ch. Oxon., M.R.C.P. Lond., has been appointed House Physician to King's College Hospital.

DATE, WM. H., M.R.C.S., has been appointed Medical Officer of Health to the Wellington Rural District Council.

DAVOREN, J., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer to the Holborn Union Schools at Mitcham.

EDMUNDS, F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Chesterfield Sanitary District and the Workhouse of the Chesterfield Union.

ELLIOT J., M.R.C.S., has been appointed Medical Officer of Health to the Erith District Council.

ENSOR, HY. C., M.R.C.S., has been appointed Honorary Ophthalmic Surgeon to the Newport and Monmouthshire Infirmary.

EVERS, CHAS. J., M.D. Durh., M.R.C.S. Eng., has been reappointed Medical Officer of Health for the Faversham Borough and Port Sanitary Authority.

FLOWER, FRED., M.R.C.S., has been appointed Medical Officer of Health to the Warminster District Council.

GOODFELLOW, JAS. A., M.B., C.M.Glas., has been appointed Medical Officer of Health to the Brampton Rural District Council.

JONES, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Aberavon.

KEMPTHORNE, A. E., M.R.C.S., has been appointed Medical Officer for the Second Sanitary District of the Parish of St. Matthew, Bethnal-green.

LEAF, CECIL HUNTINGTON, M.A., M.B., B.C. Camb., M.R.C.S., has been appointed Assistant Demonstrator in Anatomy at the London Hospital.

MACKINTOSH, A., M.D., L.F.P.S., L.M. Glasg. has been appointed Medical Officer of Health to the Chesterfield Rural District Council, and also to the Urban District Councils of Clay Cross and Dronfield.

MOSSMAN, R. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Milton Sanitary District of the Sculcoates Union, vice Jackson, resigned.

MOSSOP, A. GEO., L.R.C.P., L.M., L.R.,C.S. Irel., has been appointed Medical Officer of Health to the Newhaven Urban District Council.

NETTLE, WM., M.R.C.S., has been reappointed Medical Officer of Health to the Liskeard Town Council.

OLIVER, GEORGE H., M.R.C.S. Eng., L.R.C.P. Lond., L.S.A., has been appointed Assistant Surgeon to the Bradford Eye and Ear Hospital, vice G. H. Dodd, resigned.

OLVER, R. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

PALMER, A. M., L.R.C.P., L.M. Edin., M.R.C.S., has been appointed Medical Officer of Health to the Whittington Urban District Council.

PENNY, F. S., M.R.C.S., L.R.C.P., has been appointed House Surgeon to King's College Hospital.

PERCIVAL, THOS., M.R.C.S., L.M., has been appointed Medical Officer of Health to the Pontefract Rural District Council.

REES, DAVID V., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Brecon Urban Sanitary District.

RICE, T. E., L.S.A. Lond., has been appointed House Surgeon to King's College Hospital.

ROBB, A. GARDNER, M.B., B.Ch. Irel., has been appointed Government Medical Officer, Public Vaccinator, and Medical Officer of Health for the Springfield District of Belfast.

ROBERTS, G. A. E., M.R.C.S., has been appointed Medical Officer of Health to the Winchester District Council.

SHEPPARD, AMY, M.B. Lond., has been appointed Assistant Ophthalmic Surgeon to the New Hospital for Women, Euston-road.

SMITH, G. A., M.R.C.S., L.R.C.P., has been appointed Ophthalmic Clinical Assistant to King's College Hospital.

SOUTHEY, A. J., M.R.C.S., has been appointed a District Medical Officer to the Eton Urban District Council.

THOMSON, D. G. P., M.B., M.S. Edin., has been appointed Medical Officer of Health to the Penrith District Council.

WATSON, WM., M.R.C.S., has been reappointed Medical Officer of Health to the Rochester Urban and Port Sanitary Authorities.

WEBB, WM. H., M.D. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health to the Kingsbridge Rural District Council.

WILLS, THOMAS MUNNS, F.R.C.S. Irel., J.P., Senior Honorary Surgeon, has been appointed Consulting Surgeon to the Bootle Borough Hospital, Liverpool.

YOUNG, T. BRETT, M.D. Brux., M.R.C.S. Eng., L.R.C.P. and S. Edin., has been appointed Medical Officer of Health to the Halesowen Rural District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and residence. Applications to the Secretary, 36, King William-street, London-bridge, E.C.

BLACKBURN AND EAST LANCASHIRE INFIRMARY, Blackburn.—Junior House Surgeon. Salary £50 per annum, with board, washing, lodging, &c.

BOROUGH OF STOCKTON-ON-TEES.—Medical Officer of Health and Medical Superintendent of the Fever Hospital. Salary £300 per annum. Applications to the Town Clerk.

CARDIFF INFIRMARY.—Senior Resident Medical Officer for one year. Salary £100 a year, with washing and furnished apartments.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer to act as Locum Tenens for about three months during the summer. Salary £2 2s. per month, with board, lodging, &c.

DARLINGTON HOSPITAL AND DISPENSARY.—House Surgeon, unmarried. Salary £100 per annum, with board and lodging.

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon, unmarried. Salary £70. To reside and board in the Hospital.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, E.—Assistant Physician for Out-patients.

EAST SUFFOLK AND IPSWICH HOSPITAL, Ipswich.—Second House Surgeon, unmarried. Salary £70 per annum, with board, lodging, and washing.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—Pathologist and Registrar for one year. Honorarium 50 guineas per annum.

GUARDIANS OF KENSINGTON.—Second Assistant Resident Medical Officer for the Workhouse and Infirmary. Salary £80 per annum, with apartments, board, and washing. Applications to the Clerk to the Guardians, Marloes-road, Kensington, W.

HALIFAX INFIRMARY AND DISPENSARY.—House Surgeon, unmarried. Salary £80 per annum, advancing £10 per annum up to £100, with residence, board, and washing.

MANCHESTER SOUTHERN AND MATERNITY HOSPITAL.—Resident House Surgeon. Honorarium at the rate of £50 per annum and board.

NEW HOSPITAL FOR WOMEN, Euston-road, London.—Medical Women as House Surgeons.

ROTHERHAM HOSPITAL AND DISPENSARY.—Resident House Surgeon for three years. Salary £100 per annum, with rooms, washing, and commons (exclusive of alcoholic drinks).

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician, for six months. Salary at the rate of £70 per annum, with board and lodging.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand.—Clinical Assistants for six months.

ST. LUKE'S HOSPITAL, London, E.C.—Clinical Assistant for six months, Board and residence provided.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—Assistant House Surgeon for six months. Board, washing, and lodging in the Institution provided.

WEST RIDING ASYLUM, Wadsley, near Sheffield.—Fifth Assistant Medical Officer. Salary £100 per annum, rising £10 a year up to £150, with board &c.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—Junior House Surgeon, unmarried. Salary £50 per annum, with rooms and board.

WORCESTER GENERAL INFIRMARY.—Assistant House Surgeon and Dispenser for two years, unmarried. Salary £70 per annum, with board, residence, and washing.

Births, Marriages, and Deaths.

BIRTHS.

COWLEY.—On May 2nd, at Willow Bank, Upton-on-Severn, the wife of J. Selwyn Cowley, M.R.C.S. Eng., &c., of a son.

CUTFIELD.—On May 3rd, at Merton House, Ross, Herefordshire, the wife of Arthur Cutfield, B.A., B.Sc., M.R.C.S., of a son.

GODFREY.—On May 4th, at Inglenook, Stockton-on-Tees, the wife of T. H. Godfrey, Esq., M.B., of a daughter.

HURRY.—On May 5th, at Abbotsbrook, Reading, the wife of Dr. Jamieson B. Hurry, M.A. Cantab., of a daughter.

MACGILLIVRAY.—On May 5th, at Rutland-street, Edinburgh, the wife of Charles Watson MacGillivray, M.D., F.R.C.S. Edin., of a son.

MINTER.—On May 6th, at Nelson-street, Rotherham, Yorks, the wife of J. L. Minter, M.D., M.R.C.S., of a daughter.

SLAUGHTER.—On May 5th, at Darwen Bank, Darwen, the wife of Ernest A. Slaughter, B.A., M.D., of Brondesbury-road, Kilburn, N.W., of a son.

WALLER.—On May 3rd, at Thorneybrook, Chelmsford, the wife of T. H. Waller, M.R.C.S., L.R.C.P. Lond., of a daughter.

MARRIAGES.

JOHNSTON — GAINSFORD.—On May 2nd, at St. Saviour's, Hitchin, Alexander J. J. Johnston, Staff-Surgeon Royal Navy, H.M.S. Blenheim, son of the late J. Wingate Johnston, M.D., R.N., to Hilda Margaret, daughter of the Rev. George Gainsford.

MCCARTHY—LEGGATT.—On April 30th, at St. John Baptist Church, Holland-road, W., James Desmond McCarthy, C.M.G., M.D., late Surgeon R.N., and P.M.O. in H.M. Colonial Service, retired, to Clara Augusta, eldest daughter of the late Horatio Bethune Leggatt, Brownwich, Hants.

SUTTON—WOLFE.—On April 30th, at Christ Church, Woburn-square, by the Rev. Henry Carter, M.A., of Forty-hill, Enfield, assisted by the Rev. J. J. Glendinning Nash, M.A., incumbent, Charles Robert Arnold Sutton, M.A., M.D. Cantab., of Sidcup, younger son of R. C. Sutton of Carisbrooke House, Forest-grove, Nottingham, to Charlotte Amelia, eldest daughter of James W. Wolfe, of 20, Russell-square, W.C., and Oakfield, Hitchin.

TODD—DECKERS.—On April 27th, at Bromley, Kent, Frederick Todd, M.R.C.S., L.D.S., of Finsbury-circus, to Alphonsine, elder daughter of the late Alphonse Deckers, of Amhurst-road, N.E.

YEOMAN—FERGUSSON.—On April 30th, at St. Peter's, Heswall, Cheshire, Dr. Christopher William Yeoman, eldest son of A. R. Yeoman, Esq., M.A., Inspector's Department, Somerset House, London, to Ida Isabel (Idabelle), youngest daughter of the late James Fergusson, Esq., of Liverpool.

DEATHS.

BUCHANAN.—On May 5th, Sir George Buchanan, LL.D., M.D., F.R.S., of Woburn-square, W.C., formerly Medical Officer of H.M.'s Local Government Board, aged 64.

BUTTERFIELD.—On May 1st, at his residence, Greystone, Sevenoaks, Harris Butterfield, M.R.C.S., L.S.A., Medical Officer of Health for West Kent.

CARTER.—On May 4th, at Budleigh Salterton, Henry John Carter, F.R.S., retired Surgeon-Major Bombay Army, aged 82.

DURHAM.—On May 7th, at 82, Brook-street, Grosvenor-square, Arthur Edward Durham, F.R.C.S., Consulting Surgeon to Guy's Hospital, member of the Council of the Royal College of Surgeons, in his 62nd year. No flowers by request. The funeral service will be held at St. George's Church, Hanover-square, at one o'clock p.m. on Friday, May 10th. Funeral at the Crematorium, Woking; train leaving Necropolis-station, L. and S.W.R., Westminster-bridge-road, at half-past two.

HARPER.—On May 3rd, at Abingdon-road, Kensington, W., Henry Harper, Deputy-Surgeon-General Madras Medical Service (Retired).

MOORHEAD.—On May 6th, at Margate, Edward Moorhead, M.D., Deputy-Inspector-General (Retired) Army Medical Department, aged 75 years.

SPACKMAN.—On May 5th, at Faringdon, Berks., Frederick Charles Spackman, M.R.C.S., L.S.A., aged 69 years.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Gt. Northern Central (2.30 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8 P.M. General Meeting for the Election of Officers and Council. 8.30 P.M. Ordinary Meeting. Mr. C. B. Lockwood: The Diagnosis of Retro-peritoneal Sarcoma, with cases.

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Adjourned Discussion on Dr. Felix Semon's paper on "The Probable Pathological Identity of the Various Forms of Acute Septic Inflammations of the Throat and Neck, hitherto described as Acute Œdema of the Larynx, Œdematous Laryngitis, Erysipelas of the Pharynx and Larynx, Phlegmon of the Pharynx and Larynx, and Angina Ludovici."

LONDON VEGETARIAN SOCIETY.—8 P.M. Public Meeting on Slaughter-houses, to be held in the Board Room, Memorial Hall, Farringdon-street, E.C. Sir B. W. Richardson will take the chair and the speakers will be Colonel Coulson, Mr. E. Maitland, Mr. Herbert Burrows, Mr. Bernard Shaw, Mr. Josiah Oldfield, Mr. A. C. Field, and Mr. Dorrington Boyle.

WEDNESDAY.—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-sq., W.). 8 P.M. Mr. W. C. Bosanquet: On the Anatomy of Nyctotherus Ovalis.—Dr. A. Bruce: A New Microtome for Cutting.—Miss Ethel Sargant: Some Details of the First Nuclear Division in the Pollen-Mother-Cells of Lilium Martagon, &c.

FRIDAY.—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-sq.).—8 P.M. Professor Lane Notter: Soil as a Factor in the Production of Disease.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 1 P.M., Mr. W. Lang: Lacrymal Affections.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. E. Law: Examination of the Throat and Nose.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Hypochondriasis.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields, 8 P.M., Mr. A. S. Morton: Retinal Affections.—Hospital for Skin Diseases, Blackfriars, 1 P.M., Dr. Payne: The Diseases called Lichen.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Dr. W. S. Colman: Stammering and other Speech Defects.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Ormerod: Paraplegia.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. Reginald Harrison: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—Bacteriological Laboratory, King's College, 3 to 5 P.M., Prof. Crookshank: Examination of Air, Soil, and Water.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Melancholia.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 9th, 1895.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May	3	30·55	N.W.	53	48	114	63	44	...	Bright
,,	4	30·50	E.	52	48	106	65	46	...	Cloudy
,,	5	30·50	N.E.	53	47	116	62	42	...	Cloudy
,,	6	30·30	N.E.	57	52	116	73	46	...	Bright
,,	7	30·22	E.	60	52	117	70	52	...	Bright
,,	8	30·05	E.	59	53	114	70	50	...	Bright
,,	9	30·00	S.E.	59	52	114	73	50	...	Bright

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

UNDER no circumstances do the Proprietors authorise the insertion of loose advertisement circulars and handbills in THE LANCET. Any such announcements are inserted by the newsagents, whom the Proprietors cannot control. At the same time, the Manager will be glad if readers will send him copies of any circulars, with the name and address of the agent through whom they obtain THE LANCET, and the Manager will then endeavour to mitigate the nuisance.

NEWSPAPER THERAPEUTICS AND PERSONAL ADVERTISEMENT.

THE following is one among many answers to medical questions in the *Echo* of May 4th. The conduct of advising patients through the medium of a newspaper is at best not a very high proceeding, but when the writer practically divulges his personality and his address, as in the following advertisement (if, indeed, he be a medical man), he violates all the principles of professional method and modesty. The mere fact that the name is withheld does not affect the question. That may possibly be soon ascertained.

"(27,051) CATARRH.—Simply pass down the nose at night carbolated vaseline, and gargle with: acid salicylic, ½ drm., acid boracic, 2 drm.; mix; a saltspoon to a wineglass of warm water twice daily. She (*sic*) how you are in ten days.—*Lennox* (14, Connaught-mansions, Coldharbour-lane, S.W.)."

Lena.—From the facts before us this case appears to be an extremely difficult one to advise upon; but we should think our correspondent has his remedy by proceeding against the authority for his fees, and procuring skilled medical evidence in his support.

THE CASE OF MR. C. B. TOWNSHEND.

THE following additional subscriptions have been received and are hereby gratefully acknowledged:—

Dr. D. F. S. Cahill (Berwick-on-Tweed)	£1	1	0	Dr. R. Douglas Powell	£5	0	0
Dr. B. Addy (Pendleton)	1	1	0	Mr. H. F. L. White (Caxton, Cambs)	0	10	0
Dr. Jas. Weaver (Southport)	0	10	6	Mr. Hy. Cayley (Southampton)	0	10	6
Dr. H. J. MacEvoy (Brondesbury)	0	10	6	Mrs. Williams (Birkenhead)	0	2	6
Dr. Alfred Sangster	0	10	0	Mr. John Hall (Sheffield)	1	1	0
Dr. Jas. Braithwaite	1	1	0	Dr. G. Evan H. Norton (London)	1	1	0
Mr. J. Alcock (Burslem)	1	0	0	Dr. Langdon Down	2	2	0
Mr. C. J. Williams (Lincoln)	2	2	0	T. C. (Leeds)	0	5	0
Dr. F. N. Williams (Brentford)	0	7	6	Dr. T. Carr	0	2	6

Further subscriptions will be thankfully acknowledged by the Rev. H. Townshend, 41, King Henry's-road, South Hampstead, N.W.

A CASE FOR DIAGNOSIS.

To the Editors of THE LANCET.

SIRS,—A lady who was confined of her first child in a normal manner was suddenly seized with a rigor at about 11 A.M. on the ninth day. The patient was seen half an hour later and complained of feeling cold. The pulse was rapid, the surface of the body cold, the temperature in the mouth registered 102° F., and the breathing was hurried; vomiting occurred, first of the contents of the stomach, and later of bile. The shaking and shivering continued for an hour from the commencement, and then profuse perspiration set in; the cheeks and edges of the lips and mucous surfaces became livid, the inner surface of the lips was blanched, and the patient suffered from great dyspnœa and anxiety, with restlessness. She complained that sounds seemed at a distance and of ringing in her ears; also that vision was obscured, and that she saw things as through a yellow fog. About three hours from the commencement of the attack rather profuse menorrhagia set in, which lasted about three hours; vomiting continued; the heart's action was rapid, the first sound all but obliterated; and the pulse irregular and too rapid to be counted. The temperature was 96° F. All these alarming symptoms continued till about midnight, when improvement very gradually set in. The patient herself, although only semi-conscious, several times complained that she was dying, and when better said that she felt that she must give up the struggle for breath during the worst part of the attack. Recovery, after once setting in, continued without interruption. The treatment included stimulants by mouth and per rectum. Inhalations of oxygen also afforded great relief.

I am, Sirs, yours truly,

May 6th, 1895. M.D. EDIN.

THE BOARD OF AGRICULTURE AND ANTHRAX.

THE *Times* of May 9th states: "Some extraordinary statements as to the ravages of anthrax and the attitude of the Board of Agriculture in relation thereto were made at a meeting of the Leicestershire County Council yesterday. The disease broke out on the farm of a Mr. Warren at Arnesby, and not only the cattle but human beings and all kinds of animals were attacked. The farmer and sixteen men were all ill at one time, one man dying at the Leicester Infirmary. A woman in passing the plague-stricken spot was stung by a fly and died from anthrax. Cats, dogs, and birds in the neighbourhood also died. Sir Archdale Palmer stated that, in view of the seriousness and importance of the matter, the County Council had written asking the Board of Agriculture to send down an inspector to make an inquiry and report, but the Board had replied that they had not a professional officer to send down. A resolution was passed expressing regret that the Board of Agriculture had not seen fit to compiy with the request of the Council."

Mr. A. E. Motlohes.—We never prescribe. Our correspondent should consult his own medical attendant.

Drayton.—It is not satisfactory to act as an anæsthetist to a dentist who is not registered.

"MINERAL WATERS AS A BASIS OF MEDICAL ADVERTISING."

To the Editors of THE LANCET.

SIRS,—I am one of the medical practitioners referred to in your correspondence columns whose names are used in connexion with certain mineral water advertisements appearing in the Croydon papers. Kindly allow me to say that my letter was intended merely as a polite acknowledgment of a case of the Association's mineral waters sent to me, and I had no idea that it would be used as an advertisement. I have written to the secretary, asking a discontinuance of the use of my name.

I am, Sirs, yours truly,

Mitcham, Surrey, May 6th, 1895. HENRY LOVE.

*** We have great pleasure in inserting the above letter. Our correspondent's experience shows the danger of writing letters to the proprietors of articles of commerce.—ED. L.

MEDICAL ADVERTISING.

Patience.—The first advertisement is not in good taste. The second is surprising in a Fellow of the Royal College of Surgeons of Ireland—a college which prides itself on its sense of dignity. The other advertisements sent us of testimonials of carriages from medical men are of a different order, and may be left to the taste of individual medical men.

Dubitator.—1. A university degree is certainly a desirable qualification and has some advantage over a mere licence.—2. We are not aware of any exceptional value of Irish licences as compared with corresponding qualifications in Great Britain.—3. There is no solid foundation for saying that Scotch degrees are not on a level with Irish ones, or even with Irish licences, though it is intelligible that "such an opinion may occasionally be heard in Ireland."—4. The degree of Aberdeen is held in good estimation.—5. The Dublin licences do not give a legal right to the title of "Dr."

Perplexed.—The strictly proper form of plate and card for one with the qualification named should indicate the name of the practitioner followed by the initial letters of the qualification.

"FREE HOMES FOR EPILEPTICS."

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of the 27th ult. that, in answer to the inquiry of "R. W. (Newcastle-on-Tyne)," you remark that the National Society for the Employment of Epileptics is not at present able to receive non-paying patients at the Chalfont colony. Will you permit me to say that this is no longer the case, a special fund having been raised by means of which the committee are enabled to admit patients at either a reduced rate or entirely free in those cases where, after full consideration of all the circumstances, it appears to them right so to do. Unfortunately the accommodation at the colony is so limited, compared with the number of the applicants, that many candidates, whether able to pay or not, must necessarily be disappointed owing to want of room, and we most earnestly appeal to the generosity of the public to enable us to increase our buildings and provide accommodation less inadequate to the demand.

I am, Sirs, your obedient servant,

G. PENN GASKELL,
Secretary, National Society for the Employment of Epileptics.
12, Buckingham-street, W.C., May 7th, 1895.

Patient.—The question is a personal one between the druggist and his customer. We do not see any reason why a charge should not be made for a copy of a prescription, since the druggist had the trouble of recording the original, and is put to the further inconvenience of supplying a copy. But in any case a patient would do better to consult his medical adv ser and not trust to "old prescriptions."

Subscriber.—We should say Yes, undoubtedly, but if the salary exceeds the amount which requires a return our correspondent must give the name of the assistant as an employé.

Mr. L. A. White.—See THE LANCET of April 27th, 1895, p. 1095, answer to "R. W."

ERRATUM.—In the notice of the case of Surgeon-Major Gardner in THE LANCET of last week ("The Services," page 1143, 1st col.) the date of his joining the service was accidentally printed as "1894." It should have been *1874*.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Leicester Post, Sussex Daily News, Western Daily Mercury, North Cheshire Herald, Bristol Times, Newcastle Chronicle, Birmingham Mail, Walsall Advertiser, Kidderminster Shuttle, Liverpool Mercury, Sheffield Independent, Carlisle Express, Macclesfield Chronicle, Oldham Standard, Kingston Express, Yorkshire Herald, Builder, Pioneer Mail, Scotsman, Courrier de la Presse, Architect, Times of India, Elgin Courant, Sunday Times, Beverley Guardian, Ulverston Advertiser, Manchester City News, Brighton Gazette, The Charity Record, Rhyl Journal, Sheerness Guardian, Weekly Free Press and Aberdeen Herald, Reading Mercury, Sanitary Record, Hertfordshire Mercury, Yorkshire Post, City Press, Leeds Mercury, Bristol Mercury, Isle of Wight County Press, Liverpool Daily Post, Surrey Advertiser, Citizen, Mining Journal, Local Government Chronicle, Blackpool Herald, Galignani Messenger, Local Government Journal, Woodbridge Reporter, Penrith Observer, Sevenoaks Chronicle, Hastings Chronicle, West Sussex Gazette, Perthshire Advertiser, Falkirk Herald, Evening Telegraph (Dundee), Public Health, Newcastle Daily Leader, The Rock, Bedford Advertiser, British Weekly, Umpire, Halifax Guardian, Clapham Observer, Pearson's Weekly, Clitheroe Times, Gloucester Standard, South Bucks Standard, &c., &c.*

Communications, Letters &c. have been received from—

A.—Dr. R. H. Anderson, New York; Dr. R. J. Anderson, Galway; Mr. Ackrill, Harrogate; Messrs. Armour and Co., Lond.; Arema Manfg. Co., Lond.; A. M. K., Lond.

B.—Lord Balfour of Burleigh, Lond.; Dr. P. H. Boyden, Devonport; Mr. T. Bryant, Lond.; Mr. W. Berry, Wigan; Mr. L. A. Brooks, Grays; Mr. F. J. Brown, Newark; Mr. C. Birchall, Liverpool; Mr. F. Bolian, Lond.; Mr. W. J. Beale, Lond.; Messrs. Burroughs, Wellcome, and Co., Lond.; Messrs. Blondeau et Cie., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; British Castor Co., Lond.; Blackburn Infy., Sec. of; Bury Disp. Hosp., Sec. of.

C.—Dr. R. W. Carter, Weymouth; Professor J. McK. Cattell, Garrison-on-Hudson, U.S.A.; Brig.-Surg. A. Clarke, Camberley; Mr. H. W. Christmas, Lond.; Mr. W. F. Clay, Edinburgh; Mr. H. Chadwick, Manchester; Mr. C. H. Coles, Lond.; Mr. C. C. Cox, Bodalla, N.S.W.; Miss Candy, Lond.; Messrs. E. Cook and Co., Lond.; Messrs. Cassell and Co., Lond.; Messrs. Condy and Mitchell, Lond.; Cardiff Infirmary, Sec. of; Conservative; Clavicle, Lond.

D.—Dr. M. Dockrell, Lond.; Mr. J. J. Davey, Lond.; Mr. H. Davis, Lond.; Miss D'Orsey, Lond.; Messrs. Dakin Bros., Lond.; Dorset County Hosp., Dorchester, Clerk of; Damon, Lond.; Dubitator.

E.—*Electrical Review*, Lond., Proprietors of; Easy Terms, Lond.

F.—Mr. Forsaith, Lond.; Messrs. Farrer and Sons, Reading.

G.—Dr. W. R. Gowers, Lond.; Dr. G. C. Garrett, Lond.; Dr. P. R. Griffiths, Cardiff; Mr. H. R. Greene, Woking; Messrs. H. C. and E. Gowers, Maldon; Messrs. R. W. Greeff and Co., Lond.; Messrs. A. Goodman and Son, Taunton; Messrs. Gautier Fils and Neveux, France; Globe Advertising Co., Lond.

H.—Dr. F. Hawkins, Reading; Mr. F. J. Hawthorn, Stafford; Mr. W. H. Halliday, Lond.; Mr. J. Heywood, Manchester; Halifax Infy., Sec. of; H. A. B., Lond.

J.—Mr. H. Jepson, Durham; Mr. J. H. Jenkins, Lytham.

K.—Kreochyle Co., Lond., Sec. of; Kansas State, U.S.A., Librarian of.

L.—Dr. H. Love, Mitcham; Dr. V. D. Le Prade, Lyon; Dr. J. F. Little, Lond.; Mr. J. B. Lamb, Lond.; Mr. G. H. Lane, Lond.; Mr. E. Lancaster, Lond; Messrs. Luker and Co., Faringdon; Liberator Relief Fund, Lond., Hon. Sec. of; Lytham Urban Dist. Council, Chairman of; Ladies' Hygienic Assoc., Lond., Manager of.

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N.—National Hosp. for Diseases of the Heart and Paralysis, Lond., Sec. of.

O.—Messrs. Oliver and Boyd, Edinburgh; Ophthalmological Soc. of the United Kingdom, Lond., Hon. Sec. of.

P.—Mr. Bernard Pitts, Lond.; Mr. W. P. Price, Brecon; Perplexed, Weymouth.

R.—Sir W. Roberts, Lond.; Dr. T. C. Railton, Manchester; Mr. Mayo Robson, Leeds; Mr. W. C. Rainsbury, Mansfield; Mr. Redpath, Newcastle-on-Tyne; Mr. G. K. Richards, Florence; Messrs. Reynolds and Branson, Leeds; Rainhill County Asylum, Clerk of; R. B., Liverpool.

S.—Dr. F. Smith, Lond.; Dr. R. H. Shaw, New Mills; Dr. C. Smart, Washington, U.S.A.; Mr. H. Swan, Lond.; Messrs. G. Street and Co., Lond.; Messrs. Sewell and Crowther, Lond.; Messrs. Smith, Elder, and Co., Lond.; Saarbach's News Exchange, Mainz; Standard Malt Extract Co., Lond.; Socius, Lond.; Subscriber, Lond.

T.—Dr. H. Thompson, Bolton; Dr. G. B. Todd, Glasgow; Dr. G. Thin, Lond.; Mr. J. Thin, Edinburgh; Mr. W. Thirlby, Leicester; Mr. J. K. Thornton, Lond.; Miss L. Trewby, Berar; Taunton Hosp., Sec. of.

U.—Universal Cookery and Food Assoc., Lond.

V.—Dr. E. J. Vanlerburgh, Hainan; Viavi Co., San Francisco; Vi Cocoa Co., Lond.

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Y.—Mr. R. Young, Nottingham.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. G. A. Abrath, Sunderland; Dr. J. Adam, West Malling; Mr. A. Austin, Malvern; Messrs. Allen and Son, Lond.; Apollinaris Co., Lond.; A. H., Leeds; A. F., Wyke; A. B., Lond.; Æsculapius, Lond.

B.—Dr. R. Bevan, Lydd; Mr. J. P. Balbirnie, Staveley; Mr. A. R. Burch, Lond.; Mr. W. J. Beale, Lond.; Mrs. Brayfield, Hylton; Mrs. L. A. Brooks, Grays; Miss E. Bullar, Lond.; Mrs. Bennett, Lond.; Barnwood House Hosp., Gloucester, Sec. of; Blackburn Infy., Sec. of; *Birmingham Daily Post*, Publisher of; Bolton Union, Clerk of; Beta, Lond.; Brading, Lond.; B. B., Lond.

C.—Dr. D. E. Cantillon, Little Island; Dr. Cooper, Hyde; Dr. E. Clarke, Andover; Mr. C. H. Coles, Lond.; Mr. J. Carter, Lond.; Mr. H. P. Cuthbert, Clun; College of Preceptors, Lond., Sec. of; Cortland Wagon Co., Lond.; C. F., Lond.; C. E., Lond.; Climax, Lond.; Cyclone, Lond.; Cosmo, Lond.; C. E. S., Lond.

D.—Dr. A. C. Dutt, Whitby; Mr. J. B. Davidson, Lond; Devonshire Hosp., Buxton, Sec. of; Derbyshire Roy. Infy., Sec. of; Demonstrator of Anatomy, Edinburgh; Devonia, Lond.; Damon, Lond.; Double-Dip, Warwickshire.

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F.—Dr. J. Findlay, Penpont; Dr. W. R. Fenton, Kiltegan; Mr. G. E. FitzGerald, Grahamstown, South Africa; Mrs. Fowler, Pendlebury; Fibula, Lond.; Femur, Lond.

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I.—Influenza, Lond.

J.—Messrs. W. and A. K. Johnston, Edinburgh; J. H., Lond.; Justitia, Lond.; J. M. T., Lond.

K.—Messrs. Keith and Co., Edinburgh.

L.—Dr. W. M. Leslie, Lond.; Dr. W. C. Luffman, Lond.; Dr. M. B. Lele, Kampli, India; Mr. W. Land, Wakefield; Mr. R. Leigh, Liverpool; Lumen, Lond.

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O.—Ozone, Lond.; O., Lond.

P.—Mr. E. Porter, Worcester; Mr. Pinney, Shaftesbury; Mr. C. S. Panton, Isle of Man; Purchaser, Lond.; Primrose, Lond.

R.—Mr. W. Reeve, Lond.; Messrs. J. Robbins and Co., Lond.; Messrs. Reid and Donald, Perth; Royal College of Physicians, Lond., Treasurer of.

S.—Dr. J. B. Spence, Burntwood; Mr. E. Smyth, Portoferry; Mrs. Stubbs, Lond.; Messrs. Savory and Moore, Lond.; Messrs. Squire and Sons, Lond.; Messrs. Schwertzer and Co., Lond.; Springfield House Lunatic Asyl., Bedford, Sec. of; Statim, Lond.; Soleil, Lond.; Surgeon, Lond.; Spes, Lond.; S. G. H., Lond.

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V.—Mr. H. W. Vaughan, Gosforth; Veritas, Lond.

W.—Dr. F. B. Wells, Lond.; Dr. J. Wilson, Haverfordwest; Mr. S. Wand, Leicester; Mr R. V. Wylie, Lamlash; Mr. E. S. Warburton, Treherbert; Mr. J. R. Whitaker, Edinburgh; Mrs. Ward, Weybridge; Worcester, Lond.; W. T. H., Lond.; W. J. B., Burton-on-Trent; W., Lond.

X.—X. P. Q., Lond.; X., Lond.

Z.—Zeno, Lond.; Z. Y., Lond.

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Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière, Asnières, Paris.